



UMASS DONAHUE INSTITUTE



## Connecticut Knowledge Corridor Growth Business Study

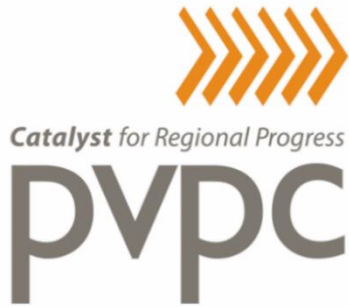
*Prepared for the Connecticut Knowledge Corridor Business Study Group:*

by  
UMass Donahue Institute  
Economic and Public Policy Research

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## Executive Summary

### **Purpose and Background:**

The Economic and Public Policy Research (EPPR) group at the UMass Donahue Institute was engaged to conduct research on growth oriented companies in the Connecticut Knowledge Corridor region (hence referred to as the Capital Region in the rest of this report). In this study, the sponsors intended to identify companies in the region at all growth levels, including high growth firms, companies experiencing slower sustained growth over time, and those firms not growing but may have the potential for growth in the future. The research includes a secondary data analysis and phone survey of businesses in Hartford and Tolland counties. This work sought to improve the understanding of the business needs and success factors of sustained growth-oriented companies within the region. The research focused on small to medium-sized firms in the region, defined as businesses with between 5 and 500 employees. This study is similar in scope and research approach as a study released by EPPR in April 2013 regarding growth businesses in the Pioneer Valley region of Massachusetts, which includes Hampden, Hampshire, and Franklin counties.

The objectives of the sponsors are to use the research findings to support their efforts to:

1. Drive the creation and growth of businesses in the region by developing a supportive financing and business assistance environment and by demonstrating/recognizing the success of existing businesses.
2. Increase and sustain job creation and retention.
3. Enhance the long term expansion and sustainability of the economic base in the region.

To support these objectives, this research was designed to help:

1. Identify growth oriented businesses and industries in the Capital Region, as well as understand their characteristics, determine what contributes to their success, and consider the challenges and constraints to continued growth.
2. Identify businesses that are not growing, in order to assist the sponsors to better target businesses and industry sectors with the potential to grow if constraints are addressed.
3. Identify the types of business assistance that would address growth needs, such as technical assistance, financing options, navigation of the regulatory environment, and business networking.
4. The intention is that the data gathered from the study will be used to enhance business assistance programs in the region to best target capital resources to growth oriented businesses, as well as for economic development benchmarking and planning.

Our study focused on small to medium-sized businesses, in selected industries, that were open in 2007 and still existed in 2012. It is important to note that this study period spanned the Great Recession period of 2007-2009. Not unexpectedly, the number of businesses in our study that showed employment growth during the study period was limited. Rather, the majority of businesses demonstrated little employment change over the study period. Our data show that businesses in the Capital Region remained relatively resilient during and immediately following the



global economic crisis. That said, the global economic environment severely restricted growth potential during the study period. Still, over 633 firms in the region had positive job growth during this challenging economic time period. Many more had positive sales growth, providing some evidence that firms were able to increase revenue and productivity and maintain competitiveness, though remained cautious about hiring new workers. The sponsors proceeded with the study knowing these constraints with the intent of setting a baseline understanding from which to conduct further analyses in the future.

Our analysis focuses on the National Establishment Time Series (NETS) database because it offers historical firm-level data on a wide variety of business statistics over a 20 year time period.

### **Key Findings:**

This study of business growth in the Capital Region, with a focus on establishment level data, provides two key areas of understanding. First, the profile of small to medium-sized businesses in the study group sheds light on the mix of establishments by industry, growth in jobs and sales, and location. Second, the completion of 185 detailed business surveys provides a rich set of business feedback on the region's economic conditions in terms of success factors, barriers to growth, and areas for business and financial assistance. Note that businesses with less than five employees and more than 500 employees in 2007 were excluded from this analysis. Key findings from this study include:

- Small businesses predominate our study group in the Capital Region: 71 percent of firms in the study group have fewer than 20 employees. Similarly, 70 percent of businesses responding to the telephone survey had 10 employees or less.
- The vast majority (88 percent) of small to medium sized firms in the Capital Region experienced stable job growth from 2007 to 2012, a time period in which the region saw a 4.7 percent decrease in total establishments and 5.7 percent decrease in total employment. The large number of surviving firms that experienced stable or positive job growth, along with the many more with increased sales revenue, helps demonstrate the resilience of the economy during the Great Recession and the dynamic nature of small to medium -sized businesses.
- The most notable industry in terms of employment change in the Capital Region is Manufacturing. Generally speaking, the distribution of growth firms by industry is fairly similar to the distribution of all firms by industry. The most notable exception to this is Manufacturing. While the Manufacturing industry makes up 11 percent of all firms in our study universe, it makes up 20 percent of all growth firms and 19 percent of all fast growing firms in our study. Interestingly, Manufacturing is disproportionately represented among declining firms as well, making up 18 percent of all declining firms.
- There is some variation and volatility within the Manufacturing industry in terms of job growth. The most notable declining manufacturing industry was paper manufacturing. While paper manufacturers make up eight percent of all manufacturing firms in the Capital Region, they make up 10 percent of declining manufacturing firms. Conversely, Electrical Equipment, Appliance, and Component Manufacturing is the most notable growth subindustry within Manufacturing. While this subindustry makes up seven percent of all manufacturing firms in the Capital Region, it makes up 10 percent of all growth manufacturing firms. Interestingly, some subsectors of manufacturing show concentrations of both growth and decline.



Fabricated Metal Product Manufacturing (12 percent of all manufacturing firms, 17 percent of growth manufacturing firms, and 14 percent of declining manufacturing firms) and Machinery Manufacturing (six percent total, 12 percent growth firms, eight percent decline) are both overrepresented among growth and declining manufacturing firms.

- Of the fast growing firms, 89 percent were small businesses with 5-99 employees. The two employment tiers with the largest percentage of fast growing firms were in the 10-19 employment size range at 36 percent, followed by the 20-49 employment size range with 31 percent of all fast growing firms.
- Small businesses in the region hold the key to firm growth and decline. In the Capital Region, there is a higher concentration of growth firms with 10-19, 20-49, and 50-99 employees than the overall universe of businesses. Conversely, firms with 1-4, 5-9, and 10-19 employees make up the bulk of declining firms.
- More sales growth than job growth was experienced during the study period. More sales growth is estimated for the future. The historical data on job and sales growth, along with business estimates of higher sales growth than job growth in the coming years, provides evidence of businesses expanding revenue while holding the number of employees constant. This is a sign of productivity increases and more cautious hiring plans. While only six percent of study firms experienced job growth during the study period, nearly 40 percent experienced sales growth. It appears it took moderate to fast sales growth (25-50 percent and higher) before firms would hire during the study period. In the survey, 34 percent of firms expected to increase employment in the next three years, while 67 percent expected sales to grow over the same time period.
- Forty-four percent of firms surveyed have brought innovative new products or services to the market in the last three years. Fourteen percent felt innovation was a central component to their business model.
- The primary market for surveyed businesses is Connecticut and the Northeast. Over half of all surveyed firms indicated their primary market was local (Connecticut/Capital Region) and 25 percent of firms indicated their primary market was regional (Northeast).
- Fifty-four percent of surveyed businesses thought the Capital Region was a good or excellent location for their business to succeed, with 42 percent of responding businesses indicating “good”, and another 12 percent indicating it was an “excellent” location for success.
- Eighty-six percent of surveyed firms are actively trying to grow their business. Most of this group (66 percent) would do so as market conditions allowed. The remaining 19 percent are anticipating fast growth.
- The Capital Region’s skilled workforce is a key to making or breaking a business: 51 percent of firms (and 60 percent of growing firms) named the availability of a skilled workforce as a major contributor to their success, while 36 percent of firms (and 37 percent of growing firms) cited the lack of availability of skilled workers as a major barrier to success.

- The top five major success factors cited by businesses surveyed were: management and leadership capabilities, market demand for products and services, availability of skilled workers, strength of education and workforce development system, and government policies. The top three factors for growing firms were market demand for products and services, management and leadership capabilities, and availability of skilled workers.
- The top five major barriers to success cited by businesses surveyed were: the cost of doing business (labor, real estate, taxes, energy, etc.), availability of skilled workers, market demand, permitting/regulations, and cash flow management.
- Health care costs and taxes are the biggest cost concerns for businesses. Two-thirds of firms responded that the cost of doing business was a major barrier to business success identified health care costs as a “big problem”. Sixty-three percent of such firms cited taxes as a “big problem”. The next highest ranked barrier was energy costs, but only 41 percent of firms ranked this as a “big problem”.
- When thinking of worker quality, middle-skill and technical candidates were the largest concern of survey respondents. Sixty-eight percent of surveyed firms that identified the availability of skilled workers as a barrier to business success, responded that the lack of trained middle-skill and technical candidates was at least a somewhat relevant concern. Comparatively, only 49 percent of businesses felt the same way about college level candidates.
- Cash flow management, obtaining financing, and the need for new equipment, technology, process, or efficiency are all mid-level barriers to success for all firms, and for all growing firms. These issues provide some evidence of the need for financing assistance by regional firms.
- Growing firms expressed concern over the availability of space for facility expansion. Twenty percent of growing firms surveyed said the availability of space was a major barrier to success, compared to just eight percent of all firms surveyed.
- Nearly two-thirds of surveyed businesses tried to access financing or credit in the last year, with 42 percent getting needed financing and 23 percent not being able to get needed financing. Interestingly, only 20 percent of surveyed firms expect to need financing in the next year.
- The top five needs for business assistance among survey respondents were social media and website optimization, advertising and marketing, networking with other businesses sharing best practices, market and customer research, and employee recruitment and training.
- Firms that anticipate needing financing in the next three years primarily plan to use it to purchase new equipment or technology.

## Methodology

EPPR undertook this study of business growth in the Capital Region using a variety of methods. Using proprietary time-series establishment level data from the National Establishment Time Series (NETS) database, we were able to examine and categorize business growth in the region between 2007 and 2012. The establishment data is used to develop a detailed profile of small to medium-sized businesses across the region. A telephone survey was then conducted to obtain up-to-date data on many of these firms and get their perspective on success factors, challenges and opportunities for growth in the Capital Region. The methodology left open the opportunity for the sponsors to conduct more detailed one-on-one or focus group interviews at a later date to gather additional information from targeted businesses by growth category or industry sector. The following section gives more detail on the methods used to produce the study's findings.

### Defining the Study Group

This study applies a similar framework and rationale as a previous study released by EPPR (April 2013) regarding the Pioneer Valley region of Massachusetts, consisting of Hampden, Hampshire, and Franklin counties. In the current study, EPPR worked closely with the study sponsors to develop a framework for concentrating our analysis of Hartford and Tolland county businesses. The study framework focused on business size and key industrial sectors that study sponsors felt they were most well-poised to reach out to with service offerings. These parameters were used to compile a list of businesses for the region out of the NETS database. The NETS data list was used to both analyze the key characteristics of local businesses, as well as serve as the basis for sampling for the telephone survey.

The analysis focuses on the growth of businesses in the region between 2007 and 2012, the latest year available in NETS dataset. In consultation with the study sponsors, EPPR developed a framework for identifying relevant firms for this study and creating a set of growth tiers based on employment growth rates. The following criteria were used for the analysis:

- Businesses geographically located in the Hartford and Tolland counties.
- Businesses with employment in 2007 between 5 and 500 employees and that remained in existence in 2012.
- The study focused primarily on for-profit businesses considered to be in the growth stage of the business cycle. These are businesses that would most likely benefit from small business assistance services.
- The study focused primarily on private for-profit commercial entities. Large non-profit institutions, public entities, and social services were excluded from the analysis. In some cases, only portions of larger industries were excluded from the study group, such as in educational services (NAICS 61) and health care and social assistance (NAICS 62), so as not to exclude for-profit commercial entities.

Table 1 shows the number of NETS records corresponding with the filters and exclusions used to compile the final study group. Table 2 outlines the industries that were eliminated from the study group.

**Table 1: Hartford and Tolland Counties, Connecticut - Parameters Used to Define Study Group of Firms**

Study Group Parameters	Number of Firms
NETS firms open in study year, with employment figures 5-years previous	48,641
NETS firms with less than 5 employees in base year excluded	35,452
NETS firms with 500 or greater employees in base year excluded	110
NETS firms excluded by selected NAICS code	2,325
<b>Total firms included in Study Group, after filters and exclusions</b>	<b>10,754</b>

Source: UMDI in consultation with study sponsors, National Establishment Time Series (NETS) Database, Walls & Associates

**Table 2: NAICS exclusions of Study Group Firms by Industry Sector**

Description of Selected NAICS Industry Sectors Excluded:	Removed NAICS Sectors:	2012 NAICS Definitions:
All Utilities	22	Utilities
All Real Estate	531	Real Estate
Partial Removal of Educational Services (NAICS 61) (Kept specialized professional training programs)	6111	Elementary and Secondary Schools
	6112	Junior Colleges
	6113	Colleges, Universities and Professional Schools
Partial Removal of Health Care & Social Assistance (NAICS 62) (Kept daycare providers, nursing homes and private medical offices)	62141	Family Planning Centers
	62142	Outpatient Mental Health and Substance Abuse Centers
	621991	Blood and Organ Banks
	622	Hospitals
	6232	Residential Mental Retardation, Mental Health and Substance Abuse Facilities
	6241	Individual and Family Services
	6242	Community Food and Housing, other Emergency and Relief Services
All Religious, Grantmaking, Civic, Professional and Similar Organizations	813	Religious, Grantmaking, Civic, Professional and Similar Organizations
	814	Private Households
All Public Administration	92	Public Administration
All Postal Service	491110	Postal Service
All Libraries and Archives	51912	Libraries and Archives

Source: UMDI in consultation with study sponsors, U.S. Census Bureau North American Industry Classification System (NAICS)

## Identifying Employment Growth Tiers

Records from the NETS data were used to determine area businesses' employment change from 2007 to 2012. The data were then sorted into five tiers along ranges of growth rates of interest to the study sponsors. Data on business sales was also analyzed along these same breakdowns. These growth tiers are defined as follows:

**Table 3: Growth Tiers for Analysis of Study Firms**

Employment Growth Tier	Rate of Employment Growth
Fast	50% and greater
Moderate	25% to > 50%
Slow	> 0% to < 25%
Stable	0%
Decline	Less than 0%

Source: UMDI in consultation with study sponsors

## Data Limitations

The NETS data set used in this study provides time-series firm-level data for a given region on a variety of business statistics. The data set is released with a two year lag, so the most recently available data at the time of the study were from 2012. In some cases, the contact information for companies was out-of-date. The NETS data set, based on the Dun & Bradstreet business survey, also has some limitations. While Walls & Associates (authors of the NETS data set) do their own work to impute missing values for employment and sales information for each company, not every company completes each question of the survey. Therefore some of the variables have less complete coverage than others. These variables (business legal status, women or minority owned business, export/import status, etc.) are included only in Appendix A of this report, as the information they offer is limited due to their sparse coverage across companies.

The NETS data cannot be directly compared to other publicly available datasets of establishments based on government surveys or administrative records (i.e. ES-202), since the method of gathering the information differs. Therefore, these data should not be directly compared to other public measures of employment or establishments in Hartford or Tolland counties.

The population of firms within Hartford and Tolland counties used for this survey was approximately 11,000. As noted previously, this is a subset of the larger population of firms in the NETS dataset that were open in the base year of 2007 and remained in existence in 2012 (close to 49,000). Results generated by the 185 completed business surveys do not allow for statistically-supported statements across specific categories of firms. The information *can* be used to describe how surveyed companies responded across various study categories. The data thus provides overall indications of the relative perceptions of barriers and success factors among survey respondents, as well as their expectations about growth, their interest in business assistance services, and their experiences with financing.

## Developing and Implementing the Survey Instrument

EPPR worked closely with the study sponsors to develop questions that would lead to the collection of information to help inform workforce training, financing, business planning, and access to markets and suppliers in the Capital Region. The instrument was designed to be administered by phone, and as such had to be limited in length. A professional survey firm was contracted to administer the survey. EPPR provided the survey firm with the instrument and a list of businesses (firm name and contact information) to use in sampling. The sample was randomly generated within certain priority areas. First, growth firms were oversampled in order to capture more information about these types of businesses. Stable businesses still remained the largest surveyed group. Second, EPPR and study sponsors identified core industries to oversample (such as manufacturing and health care) versus secondary industries (such as retail and construction). The survey was administered between September 26<sup>th</sup> and October 14<sup>th</sup>, 2014. Over 1,250 calls were made by the survey firm yielding 185 completed phone surveys.

The instrument (see Appendix B) consisted of 18 questions covering general business characteristics (employment, sales, market, etc.), and factors contributing to the success of the business, barriers to growth, training programs of interest, and financing.

### Survey Analysis

The survey data were analyzed for descriptive information across all questions (see Analysis and Results). In some instances, survey responses were cross-tabulated with NETS data to give additional information about the respondents.

Additional detail from the survey can be found in Appendix C.

## Analysis and Results: NETS Data

### Overview

As described above, this research consisted of two primary activities: 1) an analysis of a proprietary, secondary business establishment database with historical trend information on firms in Hartford and Tolland counties (the “NETS data”); and 2) the implementation and analysis of a survey based on the initial business establishment analysis. The following section focuses on the analysis of study firms using the NETS data. See Methodology for more detail on the study methods, data, and survey design used to produce the following findings.

### NETS Data Analysis

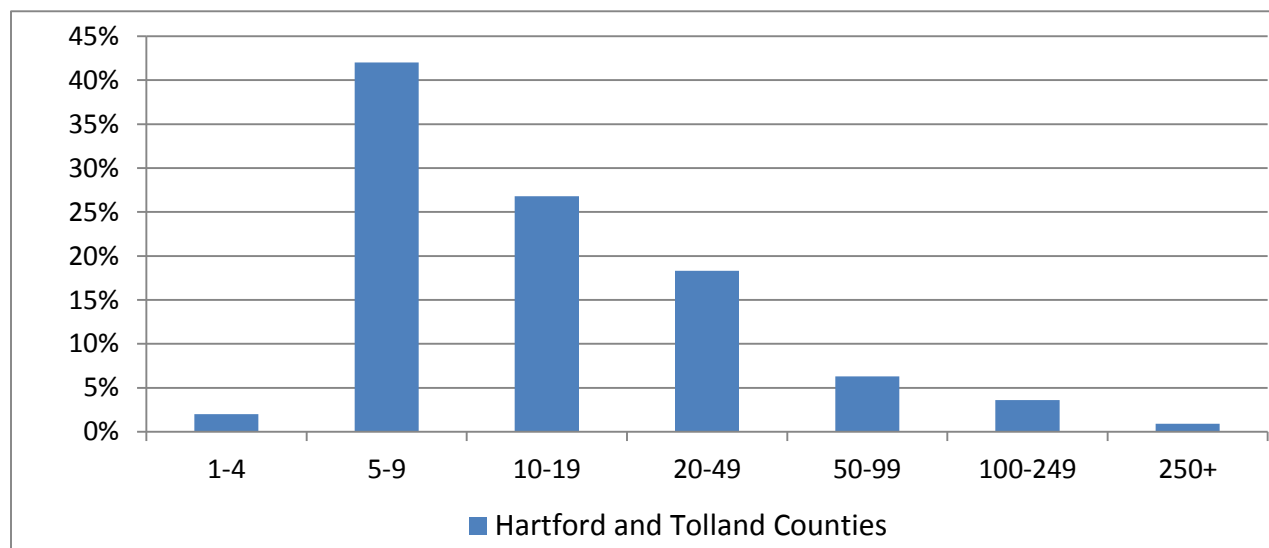
#### Profile of Hartford and Tolland Counties, Connecticut - Study Group Businesses

The following section breaks down the characteristics of firms in our study (hereafter referred to as “study firms”) by employment size, county, employment growth tier, sales growth tier, and industry sector.

##### Study Firms by Size

Using the NETS data, the analysis of study firms suggests that the vast majority of businesses in our study group are small, with less than 50 employees. About 90 percent of all firms had employment under 49 and nearly half of those firms employed between five and nine workers. Approximately 10 percent of the universe of firms had more than 50 employees, and only one percent of firms employed more than 250 workers.

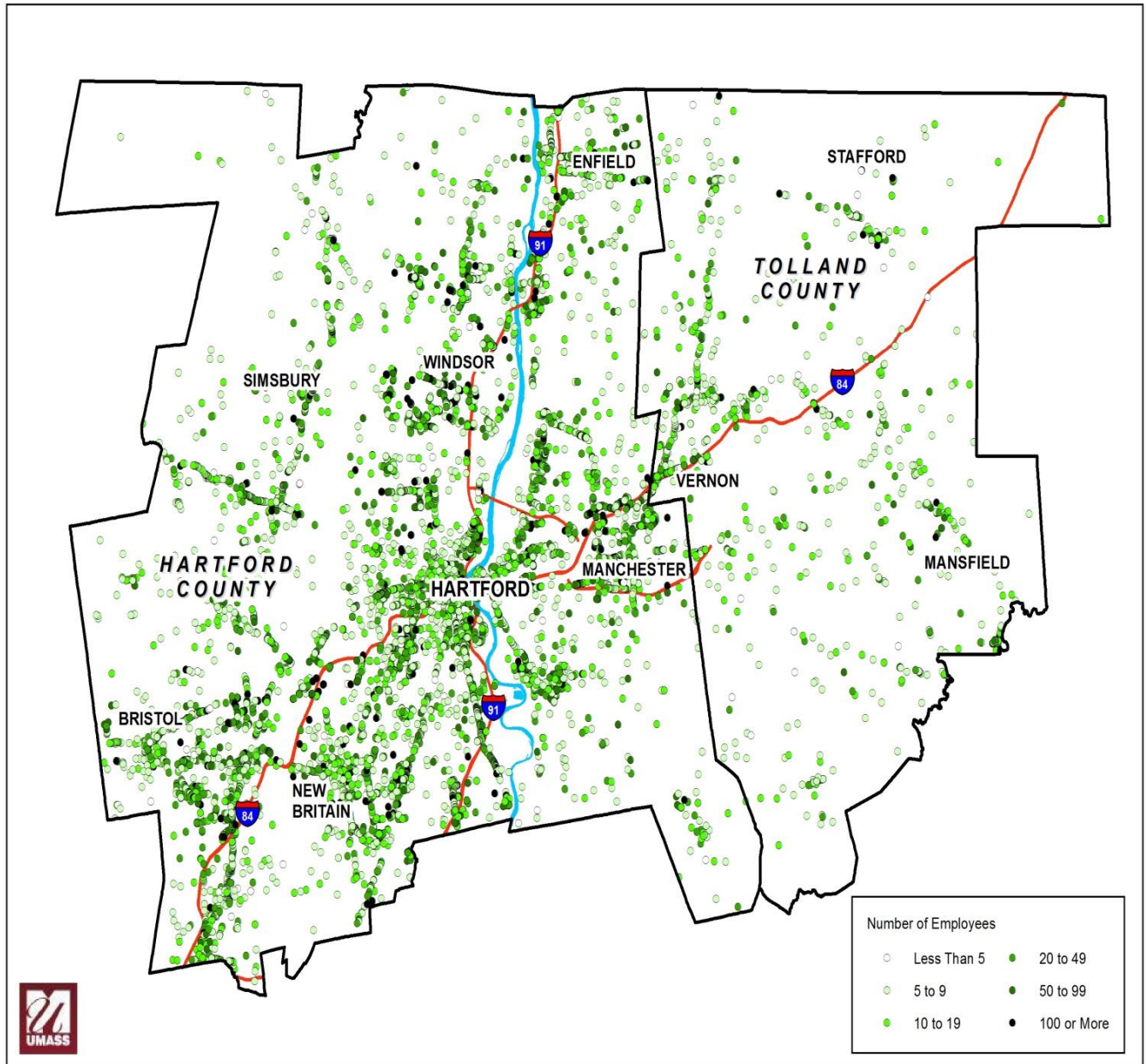
**Figure 1: Percent Total Study Firms by Employment Size, Hartford and Tolland Counties, 2012**



Source: National Establishment Time Series (NETS) Database, Walls & Associates



Figure 2: Map of Study Firms by Employment Size in Hartford and Tolland Counties, 2012

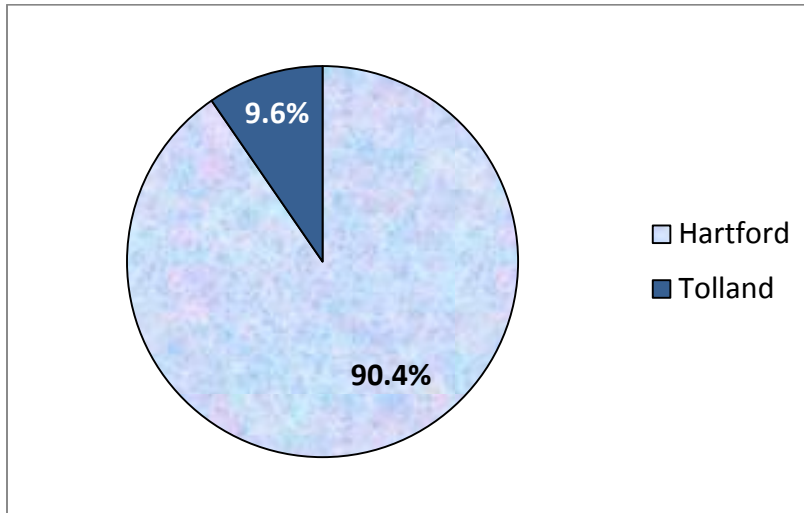


Source: National Establishment Time Series (NETS) Database, Walls & Associates; Office of Geographic Information (MassGIS) produced by UMDI

### Study Firms by County

Unsurprisingly, Hartford County is home to the majority of study firms. Over 90 percent of firms in the study group are located in Hartford County. Less than 10 percent are located in Tolland County.

**Figure 3: Number of Study Firms by County**



Source: National Establishment Time Series (NETS) Database, Walls & Associates

### Study Firms by Growth Tier

Table 4 shows the overwhelming majority of study firms, 88 percent, had stable employment between 2007 and 2012 (defined as zero percent job change reported). Approximately one in seven firms experienced employment declines; meanwhile, almost the same proportion of study firms (six percent) grew over the study period. Of this group, only three percent (305 firms) were considered “fast growers”, or firms experiencing job growth of 50 percent or greater during the study period.

The recession that occurred during the first years of the study period almost certainly lowered the total number of overall firms, as well as growth firms, if compared to other time periods. For example, according to data from the U.S. Census Bureau’s County Business Patterns, the total number of establishments in Hartford County decreased by nearly five percent from 2007 to 2012. Over the same time period, the total number of establishments in Tolland County decreased by over seven percent. Comparatively, the number of Connecticut firms decreased six percent from 2007 to 2012.<sup>1</sup>

<sup>1</sup> 2007 and 2012 County Business Patterns, U.S. Census Bureau, <http://www.census.gov/econ/cbp/>

**Table 4: Study Firms in the Hartford and Tolland Counties by Employment Growth Tier, 2007-2012**

Employment Growth Tier	Total Hartford and Tolland Counties	Percent
Fast	305	3%
Moderate	148	1%
Slow	180	2%
Stable	9,422	88%
Decline	699	7%
<b>Total</b>	<b>10,754</b>	<b>100%</b>

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

### Study Firms by Size and Growth Tier

Table 5 shows the distribution of growth tiers by establishment employment size. Each of the columns in the table equals 100 percent. Meaning, each column is the percentage distribution of all fast growing firms by size, moderate growing firms by size, and so on. A good way of examining this table is to look at the percent of total firms by establishment size (the column to the far right). If the employment growth tiers were evenly distributed among the employment size ranges, then the percentages you see in the far right column for the “total” would be the same for each growth tier. For example, approximately 27 percent of all firms are between 10-19 employees. When looking at the percentage of growth firms for businesses with 10-19 employees, any deviation from 27 percent would show a relative concentration or lack of concentration of those firms in the respective growth tiers.

Thinking of fast growing firms, there appears to be a significant concentration of firms with 10-19 employees (36 percent) and 20-49 employees (31 percent). These firms make up approximately 45 percent of all firms in our study group, but nearly 67 percent of all fast growing firms. We also see high concentrations of firms with 20-49 and 50-99 employees in both the moderate and slow growth categories. Together, these firms make up 25 percent of all study firms, but 48 percent of all moderate growth and nearly 40 percent of all slow growth firms. We see relative concentration of stable growth firms among companies with 5-9 employees. There is a high concentration of declining firms among businesses with 1-4 employees. It should be noted that based on our study focus, companies with 1-4 employees can only land in the declining class, as a business only made the initial study group by having at least five employees in 2007. That said, these data show that most of the employment movement, whether it be fast, stable, or slow is happening among the small companies (less than 100) in the Capital Region, especially among those with less than 50 employees.

**Table 5: Percent of Study Firms by Size and Employment Growth Tier, 2007-2012**

Employment Size Range	Employment Growth Tier					
	Fast	Moderate	Slow	Stable	Decline	Total
1-4*	0.0%	0.0%	0.0%	0.0%	30.2%	2.0%
5-9	9.8%	18.9%	27.2%	45.1%	24.3%	42.0%
10-19	35.7%	25.7%	23.9%	27.0%	20.3%	26.8%
20-49	30.8%	33.8%	30.6%	17.6%	16.5%	18.3%
50-99	12.1%	14.2%	8.9%	6.0%	5.4%	6.3%
100-249	9.5%	5.4%	7.8%	3.4%	2.6%	3.6%
250+	2.0%	2.0%	1.7%	0.9%	0.7%	0.9%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

### Study Firms by County and Growth Tier

Table 6 below shows the growth tier breakdown across counties. Hartford and Tolland counties show the same basic breakdown of businesses by growth tier. Tolland County has a slightly lower percentage of fast growers (2 percent) than Hartford County, and a slightly higher percentage of stable firms (89 percent). All observations by county, though, were within one percentage point of the regional averages.

**Table 6: Percent of Study Firms by County and Employment Growth Tier, 2007-2012**

Employment Growth Tier	County	
	Hartford	Tolland
Fast	3%	2%
Moderate	1%	1%
Slow	2%	1%
Stable	87%	89%
Decline	6%	7%
<b>Total</b>	<b>100%</b>	<b>100%</b>

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

### Study Firms by Employment and Sales Growth

Table 7 below examines growth in sales along the same tiers as employment growth. Many more firms experienced sales growth or decline than employment growth or decline. For example, while only 633 firms reported employment growth over the study period, 4,280 experienced sales growth. Similarly, while only 699 firms reported employment declines, 4,338 experienced sales decreases over the study period. Focuses on companies that experienced both employment and sales growth during the study period, it appears that companies need to experience moderate-to-fast sales growth (25-50 percent and higher) before expanding its workforce. Some 65 percent of growth firms were companies that experienced either moderate or fast sales growth. While 40 percent of firms had sales growth over the period, less than 6 percent had employment growth at all.<sup>2</sup>

**Table 7: Number of Study Firms by Employment and Sales Growth Tiers in Hartford and Tolland Counties, 2007-2012**

Number of Firms by Employment	Growth Tier	Number of Firms by Sales					Total
		Fast	Moderate	Slow	Stable	Decline	
Fast	Fast	229	32	13	8	23	305
Moderate	Moderate	37	60	27	8	16	148
Slow	Slow	26	28	77	4	45	180
Stable	Stable	631	408	2,625	2,086	3,672	9,422
Decline	Decline	32	13	42	30	582	699
<b>Total</b>	<b>Total</b>	<b>955</b>	<b>541</b>	<b>2,784</b>	<b>2,136</b>	<b>4,338</b>	<b>10,754</b>

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

Also, as we see in Table 7, most of the sales growth firms (65 percent) were in the slow growth category (sales increases of 25 percent or less). It is possible that many of these firms did not grow enough to justify adding

<sup>2</sup> It is worth emphasizing that in the NETS data changes in employment by firm are mainly based on responses to Dun & Bradstreet's business survey. Given the large number that reported the exact same number of employees in both 2007 and 2012, it is quite possible that some firms that reported the same employment in each year may have actually had a very small change in employment.

employment. This data also supports the notion of firms “doing more with less” as firms increase productivity to decrease costs per unit produced. See Appendix A for more detail on firms by sales growth and employment growth.

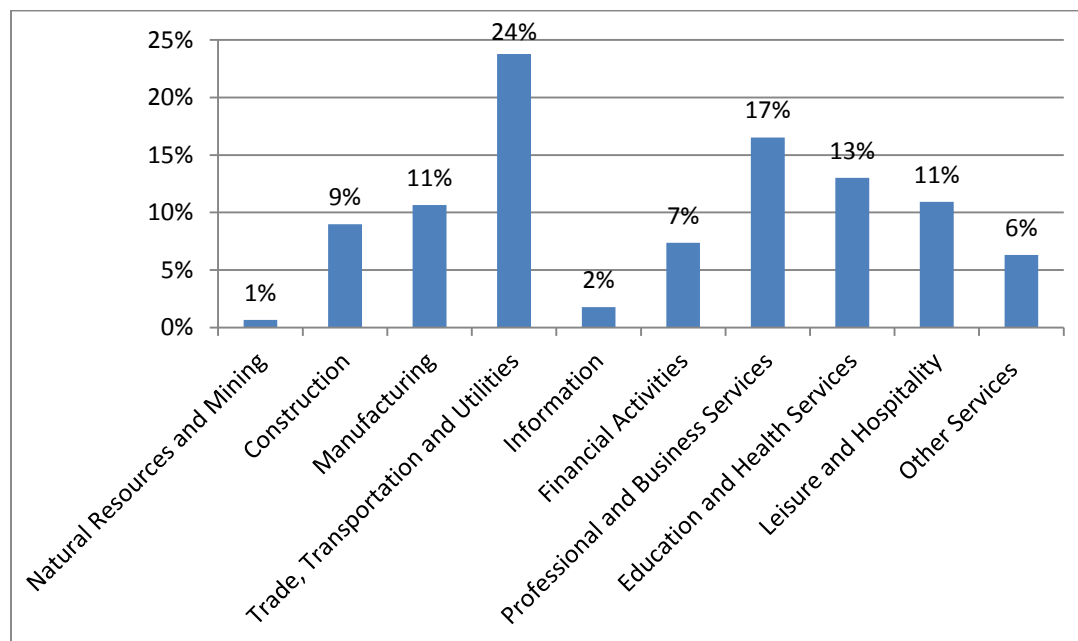
### Industrial Mix of Connecticut Knowledge Corridor Study Group Businesses

The following section offers more detail about the industrial mix of the firms in the study group. Again, our analysis focused on businesses with 5-to-500 employees and was limited primarily to private sector, for profit-firms.

#### Study Firms by Industry and Employment Growth Tier

Figure 4 below focuses on major industrial sectors.<sup>3</sup> As the graphic shows, almost a quarter of the firms in the study universe fall into the Trade, Transportation and Utilities sector. Each of the other major sectors has a sizeable presence in the region apart from Natural Resources and Mining and Information, which are largely absent.

Figure 4: Percent of Study Firms by Industry Supersector



Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

As we seen in Table 8 below, some industries are disproportionately represented in the “fast grower” category suggesting that firms in these sectors may have been more dynamic over the study period. Further analysis of “fast growing” firms reveals higher proportions of those firms than the overall study universe in the following major industrial sectors: Manufacturing (19 percent of all fast growers v. 11 percent in the study universe as a whole); Information (four percent of all fast growers v. two percent in the universe as a whole). Conversely, Leisure and Hospitality had a low concentration of fast growing firms (six percent of all fast growers v. 11 percent of all study firms).

<sup>3</sup> This analysis is at the Supersector level. Supersectors are the 1-digit version of the North American Industrial Classification (NAICS) industry codes. In other places in this study we will analyze 2-digit and 3-digit NAICS classifications. More information about NAICS Supersectors can be found at <http://www.bls.gov/ces/cessuper.htm>.

**Table 8: Fast Grower Study Firms by Industry Supersector Compared to Total Study Firms**

Industry Supersector	Fast Growth Firms		Total Firms	
	Number of Firms	Percent of Total	Number of Firms	Percent of Total
Natural Resources and Mining	3	1%	70	1%
Construction	25	8%	966	9%
Manufacturing	57	19%	1,146	11%
Trade, Transportation and Utilities	72	24%	2,557	24%
Information	12	4%	191	2%
Financial Activities	19	6%	794	7%
Professional and Business Services	48	16%	1,776	17%
Education and Health Services	39	13%	1,399	13%
Leisure and Hospitality	18	6%	1,176	11%
Other Services	12	4%	679	6%
<b>Total</b>	<b>305</b>	<b>100%</b>	<b>10,754</b>	<b>100%</b>

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

Table 9 compares fast growth firm against all growth firms across major industrial sectors. In general, we see that the distribution of all growth firms by industry is essentially the same as fast growth firms.

**Table 9: Fast Grower Study Firms by Supersector Compared to All Growth Study Firms**

Industry Supersector	Fast Growth Firms		Total Growing Firms*	
	Number of Firms	Percent of Total	Number of Firms	Percent of Total
Natural Resources and Mining	3	1%	5	1%
Construction	25	8%	52	8%
Manufacturing	57	19%	128	20%
Trade, Transportation and Utilities	72	24%	143	23%
Information	12	4%	17	3%
Financial Activities	19	6%	35	6%
Professional and Business Services	48	16%	115	18%
Education and Health Services	39	13%	71	11%
Leisure and Hospitality	18	6%	40	6%
Other Services	12	4%	27	4%
<b>Total</b>	<b>305</b>	<b>100%</b>	<b>633</b>	<b>100%</b>

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

Note: Includes all fast, moderate, and slow growth firms.

Compared to other “gazelle” studies that focus only on fast growing businesses, the study sponsors were interested in learning about not only fast growing firms, but also firms that may have the potential to grow in the coming years. This includes firms growing at a moderate or slow pace, as well as stable firms (up to 50% growth over the study period). Stable firms comprise the great majority of firms in the study group. The fact that almost 90 percent of firms in the study group had no change in employment between 2007 and 2012 could indicate that firms during



the recession were resilient: while not adding jobs, they were also trying hard to avoid layoffs.<sup>4</sup> Table 10 below shows a lack of major industrial sector concentration among stable firms. The only noteworthy sector may be Manufacturing, as only nine percent of stable firms are in Manufacturing, compared to 11 percent overall. As we will discuss in the next section, this is related to the fact that Manufacturing has concentrations among both growing and declining firms.

**Table 10: Stable Study Firms by Supersector**

Industry Supersector	Stable Growth Firms		Total Firms	
	Number of Firms	Percent of Total	Number of Firms	Percent of Total
Natural Resources and Mining	58	1%	70	1%
Construction	832	9%	966	9%
Manufacturing	893	9%	1146	11%
Trade, Transportation and Utilities	2248	24%	2557	24%
Information	162	2%	191	2%
Financial Activities	698	7%	794	7%
Professional and Business Services	1544	16%	1776	17%
Education and Health Services	1280	14%	1399	13%
Leisure and Hospitality	1090	12%	1176	11%
Other Services	617	7%	679	6%
<b>Total</b>	<b>9,422</b>	<b>100%</b>	<b>10,754</b>	<b>100%</b>

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

Table 11 below looks at declining firms by major industrial sector. The most notable trend in these data is the fact that Manufacturing firms are over-represented compared to their representation in the study group overall; 18 percent of the declining firms are manufacturers compared to 11 percent of all study firms.

<sup>4</sup> The NETS dataset cautions that employment movements in the Dun & Bradstreet data (which the NETS data is based on) are more sluggish than other public measures of employment, like the quarterly Bureau of Labor Statistics data. For instance, a firm with 4 employees will report “4 employees” even if a worker just left if they are in the process of replacing the person, or will report “5 employees” only if they decide that the additional position is permanent. NETS jobs data therefore tend to move in a “ratchet manner” (i.e. no change for a few years, then a move from 5 to 10 or from 10 to 5). For more information see, *Understanding NETS Data*, Walls & Associates, p. 4.



**Table 11: Declining Study Firms by Supersector**

Industry Supersector	Decline Firms		Total Firms	
	Number of Firms	Percent of Total	Number of Firms	Percent of Total
Construction	82	12%	966	9%
Manufacturing	125	18%	1,146	11%
Trade, Transportation and Utilities	166	24%	2,557	24%
Information	12	2%	191	2%
Financial Activities	61	9%	794	7%
Professional and Business Services	117	17%	1,776	17%
Education and Health Services	48	7%	1,399	13%
Leisure and Hospitality	46	7%	1,176	11%
Other Services	35	5%	679	6%
<b>Total</b>	<b>699</b>	<b>100%</b>	<b>10,754</b>	<b>100%</b>

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

The fact that manufacturers stand-out as both growers and decliners suggests that manufacturing is a highly competitive and dynamic industry in the region, with local firms competing with national and global manufacturers. A closer look at growing and declining firms in manufacturing show some interesting trends. The most notable declining manufacturing industry was paper manufacturing. While paper manufacturers make up eight percent of all manufacturing firms in the Capital Region, they make up 10 percent of declining manufacturing firms. Conversely, Electrical Equipment, Appliance, and Component Manufacturing is the most notable growth subindustry within Manufacturing. While Electrical Equipment, Appliance, and Component Manufacturing makes up seven percent of all manufacturing firms, it makes up 10 percent of all growth manufacturing firms. Interestingly, some subsectors of manufacturing show concentrations of both growth and decline. Fabricated Metal Product Manufacturing (12 percent of all manufacturing firms, 17 percent of growth manufacturing firms, and 14 percent of declining manufacturing firms) and Machinery Manufacturing (six percent total, 12 percent growth firms, eight percent decline) are both overrepresented among growth and declining manufacturing firms. That said, both tend to show a higher concentration in the growth firm category. These data suggest some level of volatility in these particular industries.

### Significant Growing Subsectors Among Study Firms

Next, focusing on 3-digit NAICS industries with at least 45 total firms in the study group, we see some additional insights into the detailed growth sectors. Table 12 below displays the top 15 3-digit NAICS sectors in terms of the total number of establishments, with details on how many firms were growing, stable or declining between 2007 to 2012.

**Table 12: Study Firms by 3-Digit NAICS: Top 15 Industries by Total Number of Establishments**

NAICS 3-Digit	NAICS Description	Fast	Moderate	Slow	Stable	Decline	Total
-	Total Firms in Study	305	148	180	9,422	699	10,754
541	Professional, Scientific, and Technical Services	30	23	28	1,052	84	1,217
621	Ambulatory Health Care Services	18	12	10	931	29	1,000
722	Food Services and Drinking Places	13	8	6	793	28	848
238	Heavy and Civil Engineering Construction	16	8	9	513	45	591
423	Miscellaneous Manufacturing	19	8	15	459	54	555
561	Administrative and Support Services	11	7	5	435	28	486
811	Repair and Maintenance	10	5	3	306	24	348
812	Personal and Laundry Services	2	4	3	308	11	328
332	Primary Metal Manufacturing	13	5	13	262	34	327
524	Insurance Carriers and Related Activities	9	4	0	265	20	298
522	Credit Intermediation and Related Activities	8	2	5	247	19	281
236	Mining (except Oil and Gas)	7	3	6	219	28	263
445	Building Material and Garden Equipment and Supplies Dealers	13	4	3	198	11	229
441	Merchant Wholesalers, Nondurable Goods	2	3	2	208	6	221
448	Gasoline Stations	3	3	2	179	15	202

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

Table 13 ranks the top 15 3-digit sectors in terms of the percentage of fast growing firms. Not surprisingly, some subsectors in the region have more total growth firms and fast growing firms than the regional average (six percent and three percent, respectively). Of these sectors, specialized types of manufacturing, retail, education, social assistance, and waste management establishments in the region all have greater shares of fast growing firms than the overall study group. Additionally, when looking at all growing firms, these sectors have much larger shares of growing firms than the study group overall. Complete information by 3-digit NAICS industries can be found in Appendix A.

**Table 13: Fast Growing Employment by 3-Digit NAICS: Top 15 Industries by Percent Fast Growth**

NAICS 3-Digit	NAICS Description	Number Fast Growing Firms	Percent Fast Growing Firms	Number All Growing Firms	Percent All Growing Firms
-	<b>Total All Industries</b>	<b>305</b>	<b>3%</b>	<b>633</b>	<b>6%</b>
562	Waste Management and Remediation Services	6	10%	10	16%
336	Electrical Equipment, Appliance, and Component Manufacturing	7	9%	13	16%
511	Warehousing and Storage	5	8%	7	11%
451	Clothing and Clothing Accessories Stores	7	8%	10	11%
611	Educational Services	7	7%	9	9%
333	Fabricated Metal Product Manufacturing	9	7%	22	16%
326	Chemical Manufacturing	3	7%	4	9%
517	Broadcasting (except Internet)	3	6%	5	11%
624	Social Assistance	12	6%	15	8%
339	Furniture and Related Product Manufacturing	4	6%	8	11%
445	Building Material and Garden Equipment and Supplies Dealers	13	6%	20	9%
452	Sporting Goods, Hobby, Book, and Music Stores	3	5%	5	8%
424	Merchant Wholesalers, Durable Goods	8	5%	13	8%
334	Machinery Manufacturing	3	4%	15	21%
484	Water Transportation	3	4%	4	5%

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

### Sales Growth by Industry Among Study Firms

As noted above, more firms had sales growth than employment growth over the same period. The most notable industries among sales growth were in Manufacturing. In Table 14 below, five Manufacturing subsectors are among the top 15 subsectors in fast sales growth.

**Table 14: Fast Growing Sales by 3-Digit NAICS: Top 15 Industries by Percent Fast Growth**

NAICS 3-Digit	NAICS Description	Fast Growth Firms		All Growth Firms*	
		Number of Firms	Percent of Study Firms	Number of Firms	Percent of Study Firms
-	<b>Total Firms in Study</b>	<b>955</b>	<b>9%</b>	<b>4,280</b>	<b>40%</b>
611	Educational Services	20	20%	44	44%
623	Nursing and Residential Care Facilities	18	18%	74	75%
334	Machinery Manufacturing	13	18%	38	52%
562	Waste Management and Remediation Services	11	17%	25	40%
624	Social Assistance	31	16%	174	87%
333	Fabricated Metal Product Manufacturing	19	14%	50	36%
336	Electrical Equipment, Appliance, and Component Manufacturing	11	13%	33	40%
451	Clothing and Clothing Accessories Stores	12	13%	28	30%
238	Heavy and Civil Engineering Construction	76	13%	247	42%
332	Primary Metal Manufacturing	42	13%	164	50%
713	Amusement, Gambling, and Recreation Industries	21	13%	53	32%
444	Electronics and Appliance Stores	14	12%	28	24%
339	Furniture and Related Product Manufacturing	8	11%	32	46%
511	Warehousing and Storage	7	11%	20	32%
326	Chemical Manufacturing	5	11%	20	43%

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

## Analysis and Results: Business Survey

### Overview

Using a sample of firms identified from the NETS data analysis, EPPR conducted phone surveys with select businesses in the Capital Region. The following section outlines the findings from this business survey. See Methodology for more detail on the methods, data, and survey design used to produce the following findings.

### Business Survey Analysis

EPPR subcontracted with a professional survey firm to conduct interviews with businesses located in Hartford and Tolland counties. EPPR provided the survey house the questionnaire, sampling framework, and business contact information. The business list and contact information were derived from the NETS analysis. Phone surveys were conducted in late-September and early-October 2014. The surveys were conducted with key decision makers at the firm and focused on growth expectations for the business, as well as decision makers' views regarding workforce training, financing, business planning, and access to markets and suppliers. Sampling preference was paid to businesses identified as "growth" firms in the NETS analysis. In addition, the client requested that a set of "primary" industries be oversampled in our data collection. Those primary industries included Health Care and Social Assistance, Professional, Scientific, and Technical Services, Manufacturing, Finance and Insurance, Arts and Entertainment, Transportation and Warehousing, and Educational Services.<sup>5</sup> In total, 185 businesses completed surveys.

### Profile of Survey Respondents

The following tables show the basic characteristics of surveyed firms. Table 15 below shows that the split of surveyed firms by county mirrors closely to the study universe identified in the NETS analysis.

**Table 15: Survey Respondents by County**

Geography	Firms Responding to Business Survey		Total Study Firms (from NETS data)	
	Number of Firms	Percent of Total	Number of Firms	Percent of Total
Hartford County	165	89%	9,718	90%
Tolland County	20	11%	1,036	10%
<b>Total</b>	<b>185</b>	<b>100%</b>	<b>10,754</b>	<b>100%</b>

Source: UMDI Connecticut Business Survey, 2014; National Establishment Time Series (NETS) Database, Walls & Associates

Table 16 below shows that firms with between 5-9 employees and firms with between 100-249 employees were under-represented in our survey. Conversely, firms with between 10-49 employees were over-represented in our survey group when compared to the total study universe.

<sup>5</sup> For sampling purposes, industry classification was based on the 2-digit NAICS classification provided for each business in the NETS database.

**Table 16: Survey Targets and Respondents by Employment Size**

Employment Size Range	Business Survey Firms		Total Study Firms	
	Number of Firms	Percent of Total	Number of Firms	Percent of Total
Size 250+	2	1%	99	1%
Size 100-249	2	1%	390	4%
Size 50-99	11	6%	681	6%
Size 20-49	40	22%	1,971	18%
Size 10-19	58	31%	2,880	27%
Size 5-9	67	36%	4,522	42%
Size 1-4	5	3%	211	2%
<b>Total</b>	<b>185</b>	<b>100%</b>	<b>10,754</b>	<b>100%</b>

Source: UMDI Connecticut Business Survey, 2014; National Establishment Time Series (NETS) Database, Walls & Associates

\*Note: The size range 1-4 is included because it represents firms that had 5 or more employees in 2007, but who had employment declines from 2007 to 2012.

Since the vast majority of businesses in the study group were stable in employment growth, growing businesses were oversampled in order to capture more information about these types of businesses. However, stable businesses still remained the largest surveyed group. Stable businesses were still important for this analysis as these firms that may have the potential for growth in the future.

**Table 17: Survey Targets and Respondents by Employment Growth Rate, 2007-2012**

Employment Growth Tier	Business Survey Firms		Total Study Firms	
	Number of Firms	Percent of Total	Number of Firms	Percent of Total
Fast	12	6%	305	3%
Moderate	12	6%	148	1%
Slow	11	6%	180	2%
Stable	139	75%	9,422	88%
Decline	11	6%	699	6%
<b>Total</b>	<b>185</b>	<b>100%</b>	<b>10,754</b>	<b>100%</b>

Source: UMDI Connecticut Business Survey, 2014; National Establishment Time Series (NETS) Database, Walls & Associates

Table 18 below shows the breakdown of surveyed firms by 2-digit NAICS code compared to the study universe identified in the NETS analysis. As we noted earlier, the client requested that a set of “primary” industries be oversampled in our data collection. Those primary industries included Health Care and Social Assistance, Professional, Scientific, and Technical Services, Manufacturing, Finance and Insurance, Arts and Entertainment, Transportation and Warehousing, and Educational Services.

**Table 18: Firms Surveyed by Industry**

NAICS 2-Digit	NAICS Supersector	Business Survey Firms		Total Study Firms	
		Number of Firms	Percent of Total	Number of Firms	Percent of Total
11	Agriculture, Forestry, Fishing and Hunting	1	1%	64	1%
21	Mining, Quarrying, and Oil and Gas Extraction	0	0%	6	0.1%
23	Construction	13	7%	966	9%
31-33	Manufacturing	28	15%	1146	11%
42	Wholesale Trade	13	7%	721	7%
44-45	Retail Trade	27	15%	1,595	15%
48-49	Transportation and Warehousing	3	2%	241	2%
51	Information	1	1%	191	2%
52	Finance and Insurance	16	9%	681	6%
53	Real Estate and Rental and Leasing	2	1%	113	1%
54	Professional, Scientific, and Technical Services	31	17%	1217	11%
55	Management of Companies and Enterprises	0	0%	10	0.1%
56	Administrative and Support and Waste Management and Remediation Services	5	3%	549	5%
61	Educational Services	2	1%	101	1%
62	Health Care and Social Assistance	25	14%	1298	12%
71	Arts, Entertainment and Recreation	3	2%	250	2%
72	Accommodation and Food Services	9	5%	926	9%
81	Other Services (except Public Administration)	6	3%	676	6%
-	<b>Total</b>	<b>185</b>	<b>100%</b>	<b>10,751</b>	<b>100%</b>

Source: UMDI Connecticut Business Survey, 2014; National Establishment Time Series (NETS) Database, Walls & Associates

## Business Characteristics

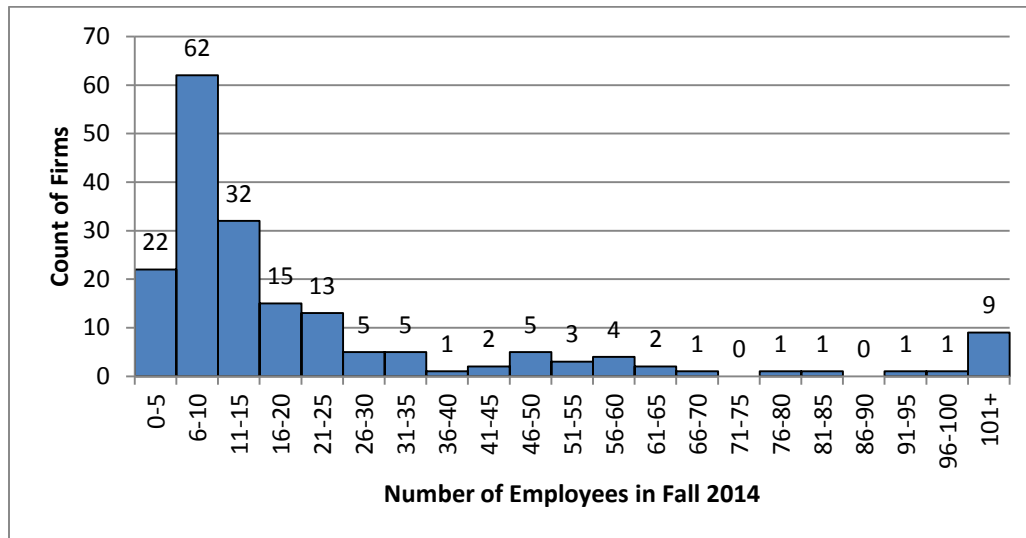
In the beginning section of the survey, firms were asked about their employment, expectations for the future in terms of employment and sales, ability to innovate, and their primary geographic market area. The following tables show the survey responses to these questions in more detail.

### *Employment and Sales Expectations*

As displayed in Figure 5, most firms who responded to the survey (84) had between 5 and 10 employees. An additional 47 firms surveyed had between 11 and 20 employees. In total, 131 firms surveyed, or 71 percent, had 20 or fewer employees.



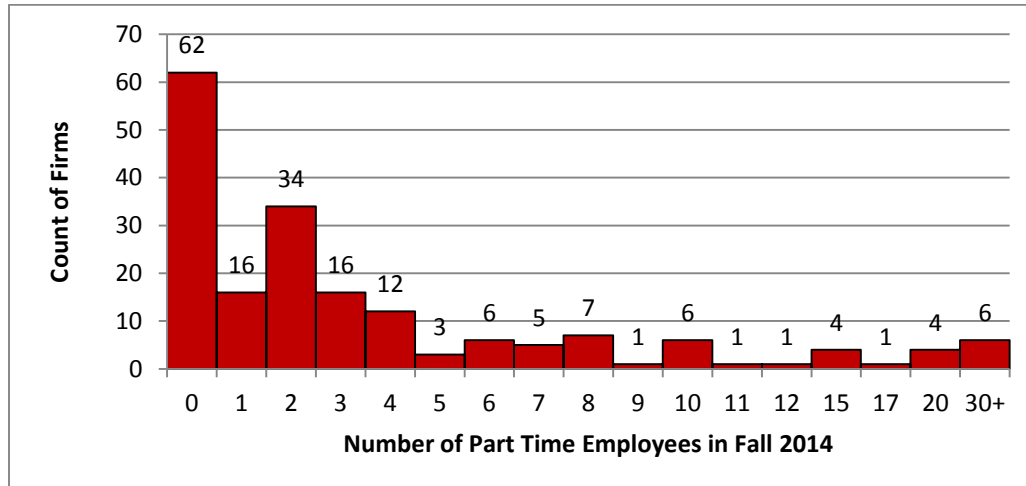
**Figure 5: How many people do you currently employ?**



Source: UMDI Connecticut Business Survey, 2014

Figure 16 below shows the number of part-time employees at each surveyed firm. Roughly one-third of surveyed firms did not have any part-time employees. Conversely, two-thirds of studied firms had part-time employees. Generally, firms had less than five part-time employees. This is not surprising as most of the companies surveyed were fairly small.

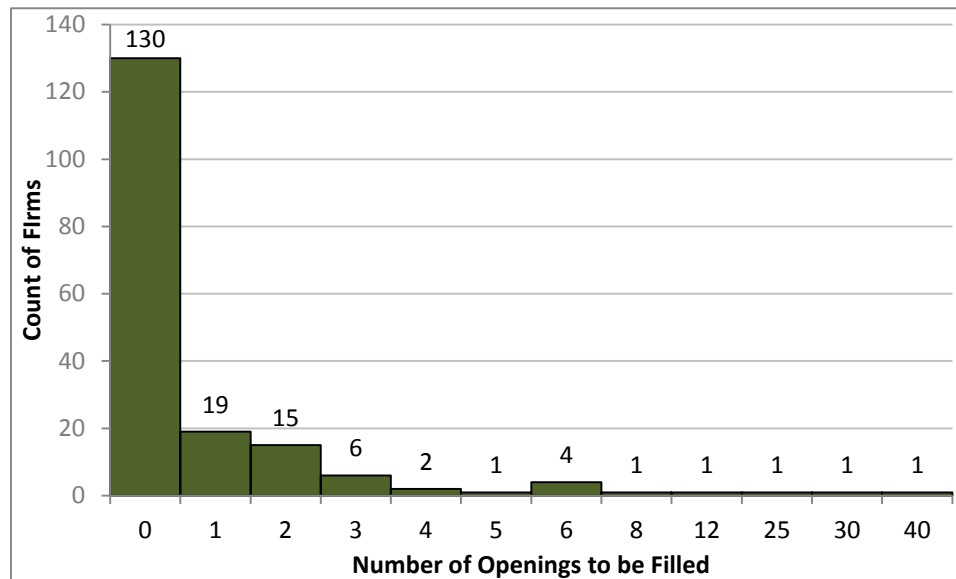
**Figure 6: Number of current employees that are part-time**



Source: UMDI Connecticut Business Survey, 2014

As we see in Figure 7, Most of the surveyed firms reported not having any job openings. Of the firms reporting job openings (55), most reported only one or two openings available (34).

**Figure 7: How many job openings are you currently trying to fill?**



Source: UMDI Connecticut Business Survey, 2014

Table 19 below shows firm expectations of employment change over the next three years. Interestingly, very few firms (3 percent) predict employment decline in the next three years. Most commonly, businesses predict they will stay the same (44 percent), while 34 percent of the survey respondents predict an increase in expected employment growth in the next three years.

**Table 19: Expected Employment Change in the Next Three Years**

Expected Growth	Business Survey Firms	
	Number of Firms	Percent of Total
Increase	62	34%
Stay the same	81	44%
Decrease	5	3%
I don't know	37	20%
<b>Total Firms</b>	<b>185</b>	<b>100%</b>

Source: UMDI Connecticut Business Survey, 2014

Next, Table 20 examines the number of employees firms expected to add in the next three years. Most firms surveyed did not expect to add any employees over the next three years (58 percent). Twenty percent of surveyed firms expected to add fewer than 4 employees, and 15 percent expected to add 4 to 10 employees. Three percent

of firms surveyed expected to add 11 to 20 employees, and one percent responded expecting to hire 21 or more employees.<sup>6</sup>

**Table 20: Survey Question 3a: Expected Employment Growth in the Next Three Years**

Expected Employment Growth	Business Survey Firms	
	Number of Firms	Percent of Total
No growth expected	86	58%
Fewer than 4 employees	29	20%
4 to 10 employees	22	15%
11 to 20 employees	5	3%
21 employees or more	2	1%
I don't know	4	3%
<b>Total</b>	<b>148</b>	<b>100%</b>

Source: UMDI Connecticut Business Survey, 2014

Interestingly, Table 21 shows that many more firms expect sales growth over the next three year as compared to employment growth. Sixty-seven percent of firms surveyed expected their sales to grow over the next three years. Eleven percent of firms surveyed expected to have no sales growth over the next three years. These data suggest that despite optimism around sales growth, firms may be reluctant to add to payroll in the short term. This is consistent with the employment and sales trends observed in the earlier NETS analysis, which showed that many more firms in Hartford and Tolland counties experienced sales growth than employment growth between the study period of 2007 and 2012.

**Table 21: Sales Growth Expectations Over the Next Three Years**

Sales Growth Expectations	Business Survey Firms	
	Number of Firms	Percent of Total
50% or more	6	3%
More than 25% but less than 50%	49	26%
Less than 25%	70	38%
I expect no sales growth	20	11%
I don't know	40	22%
<b>Total</b>	<b>185</b>	<b>100%</b>

Source: UMDI Connecticut Business Survey, 2014

<sup>6</sup> Only the 148 firms that described their employment expectations in a previous survey question were included in this analysis and accompanying table. Two respondents earlier indicated they expected their firm to increase employment, but did not specify an amount in this question. Those two firms are group within the "I don't know" category in Table 20 above.

***Innovation and Primary Market***

As part of the Business Characteristics section of the survey, firms were asked if they brought innovative new products and services to the marketplace in the last three years. Firms were also asked to identify their primary market areas. As we see in Table 22 below, half of the firms surveyed reported to having not innovated new products and services in the past three years. Of the remaining firms, 30 percent suggested that they innovated products and services to some degree in the past three years, with an additional 14 percent reporting that innovation was central to their core business.

**Table 22: Innovation of New Products and Services in the Past Three Years**

Innovation of Products and Services	Business Survey Firms	
	Number of Firms	Percent of Total
Central to business	26	14%
To some degree	56	30%
No	92	50%
Unsure	11	6%
<b>Total</b>	<b>185</b>	<b>100%</b>

Source: UMDI Connecticut Business Survey, 2014

Table 23 below shows that a little over half of the firms surveyed indicated their primary market was local (Connecticut/Metro Hartford). A quarter of firms indicated their primary market was regional (Northeast). Eleven percent of firms primarily sell to international markets.

**Table 23: Company's Primary Market Area**

Market Area	Business Survey Firms	
	Number of Firms	Percent of Total
Local (Connecticut/Metro Hartford)	96	52%
Regional (Northeast)	47	25%
National	22	12%
International	20	11%
<b>Total</b>	<b>185</b>	<b>100%</b>

Source: UMDI Connecticut Business Survey, 2014

In terms of purchasing from Connecticut-based suppliers and vendors, Table 24 shows that 32 percent of the surveyed firms purchased less than 25 percent of their goods and services locally. Approximately 20 percent of firms indicated purchasing between 25 and 50 percent and 50 and 75 percent of goods and services, respectively, from Connecticut firms. Twenty-nine percent of respondents indicated more than 75 percent of goods and services are purchased from Connecticut businesses.

**Table 24: Percentage of goods and services purchased from Connecticut businesses**

Connecticut Suppliers and Vendors	Business Survey Firms	
	Number of Firms	Percent of Total
Less than 25%	59	32%
Between 25% and 50%	37	20%
Just over 50% to 75%	35	19%
More than 75	53	29%
Did not respond	1	1%
<b>Total</b>	<b>185</b>	<b>100%</b>

Source: UMDI Connecticut Business Survey, 2014

## Business Climate and Business Assistance in the Capital Region

The following section of the survey focused on asking firms about the factors that contributed to or hindered business success, their interest in certain business assistance programs, and their experience with financing.

### *Success Factors and Barriers to Business Growth*

Table 26 shows that 54 percent of responding business thought the Metro Hartford area was either an excellent (12 percent) or good (42 percent) location for their business to succeed. Thirty-two percent of respondents thought the region was a fair location for success of their business, and 14 percent thought the Metro Hartford region is a poor location for business success.

**Table 26: Metro Hartford Region as a Good Location to Succeed**

Metro Hartford Area as a Location for Success	Business Survey Firms	
	Number of Firms	Percent of Total
Excellent	23	12%
Good	78	42%
Fair	59	32%
Poor	25	14%
I don't know	0	0%
<b>Total</b>	<b>185</b>	<b>100%</b>

Source: UMDI Connecticut Business Survey, 2014

Table 27 below displays survey responses to a series of factors that could contribute to business success. Firms were asked whether each of the factors was a major, minor, or not a factor contributing to business success. The table shows responses for both all surveyed firms, as well as surveyed firms that were identified as “growth” businesses in the NETS analysis. Among all firms, the most-identified major factor for success was management

and leadership capability (57 percent), followed by market demand for products and services (56 percent), and the availability of skilled workers (51 percent). These three factors were the most important for growth firms as well. For growth firms, market demand and services was identified as the most important factor in business success (69 percent), followed by management and leadership capability (63 percent) and availability of skilled workers (60 percent). Interestingly, a higher percentage of growth firms ranked each of the listed factors as being a “major” contributor towards business success than the full universe of surveyed firms. The sole exception to this was government policies, where 38 percent of all businesses ranked this a major factor to business success, compared to 34 percent of growth firms.

**Table 27: Factors Contributing to Business Success, Ranked by “Major” Factor**

Success Factor	Business Survey Firms			Total Growing Firms in Survey*	
	Major	Minor	Not a Factor	Major	Minor
Management and Leadership Capability	57%	23%	20%	63%	20%
Market Demand for Products or Services	56%	28%	17%	69%	17%
Availability of Skilled Workers	51%	26%	23%	60%	20%
Strength of Education and Workforce Development System	38%	32%	29%	46%	31%
Government Policies	38%	34%	28%	34%	43%
Access to Suppliers and Vendors	32%	33%	35%	43%	26%
Innovation, Product and/or Technology Improvements	30%	36%	34%	37%	29%
Access to Financing	25%	30%	44%	34%	31%
Access to Research and Development Collaborations	14%	31%	55%	17%	37%

Source: UMDI Connecticut Business Survey, 2014; National Establishment Time Series (NETS) Database, Walls & Associates, 2012.

\* Note: Includes only the 35 firms surveyed that were categorized as fast, moderate, or slow growth businesses in the NETS analysis.

Thinking next of barriers to business growth, firms were asked whether each of the factors was a major, minor, or not a barrier to business growth. Table 28 below shows responses of both all surveyed firm and surveyed “growth” businesses identified in the NETS analysis. Cost of doing business and the availability of skilled workers were ranked as the top two barriers to business growth by both all firms and growth firms in our survey. As we see in Table 29, of the respondents that indicated business cost as a barrier to growth, 67 percent indicated health care costs where a big problem, followed by taxes (63 percent) and energy costs (41 percent).

Interestingly, though not surprising, growth firms were less likely to identify market demand as a major barrier to business growth (20 percent for growth firms compared to 31 percent for all firms). Rather, growth firms were more likely to see the availability of space for facility expansion as a major barrier to growth than all firms in the survey (20 percent v. eight percent, respectively).

**Table 28: Barriers to Business Growth Ranked by “Major” Barrier**

Barriers to Growth	Business Survey Firms			Total Growing Firms in Survey*	
	Major	Minor	Not a Barrier	Major	Minor
Cost of Doing Business	55%	18%	27%	51%	17%
Availability of Skilled Workers	36%	26%	38%	37%	20%
Market Demand	31%	29%	39%	20%	34%
Permitting/Regulations	25%	33%	42%	20%	23%
Cash Flow Management	21%	36%	44%	20%	26%
Obtaining Financing	15%	30%	56%	14%	37%
Need for New Equipment, Technology, Process, or Efficiency	12%	36%	52%	11%	31%
Availability of Space for Facility Expansion	8%	29%	63%	20%	20%
Access to Suppliers and Vendors	8%	25%	66%	9%	20%

Source: UMDI Connecticut Business Survey, 2014

\* Note: Includes only the 35 firms surveyed that were categorized as fast, moderate, or slow growth businesses in the NETS analysis.

**Table 29: Detailed costs as barriers to business growth, for those businesses responding that business costs are a barrier**

Business Costs Detail, Where a Barrier	Firms Identifying Business Costs as a Growth Barrier		
	A Big Problem	A Minor Problem	Not a Problem
Health Care Costs	67%	22%	10%
Taxes	63%	29%	8%
Energy Costs	41%	41%	18%
Labor Costs	26%	52%	22%
Real Estate	19%	37%	44%

Source: UMDI Connecticut Business Survey, 2014

Note: This includes only the 135 firms responding that business costs were a barrier.

Table 30 below examines worker quality issues. Respondents that indicated that the availability of skilled workers is a barrier to growth were asked how relevant (very, somewhat, or not all all) a list of concerns about worker quality is to their issues in finding a skilled workforce. Overall, 30 percent indicate weak candidates as a very relevant issue. When probed about the level of skills need, 29 percent of these respondents signified having difficulty finding middle skill/technical candidates. Comparatively, only 17 percent of firms said the lack of college level workers was a relevant barrier in finding skilled workers. Examined in a different way, only 32 percent of firms said finding qualified middle skill candidates *was not a problem*. Comparatively, 51 percent of firms responded that finding college level candidates *was not a problem*. This suggests that issues with finding skill workers is more related to associate level and technical positions than for college level and high skill positions.



**Table 30: Survey Question 13: Detailed skills relevant to business growth, for those businesses responding that availability of skilled workers is a barrier**

Skilled Workers Detail, Where a Barrier	Any Business Survey Firms w/ Skilled Workers a Barrier		
	Very Relevant	Somewhat Relevant	Not Relevant
Weak candidates	30%	28%	42%
Lack of trained middle skills/technical candidates	29%	39%	32%
Lack of candidates with Bachelor's degrees or more	17%	31%	51%
High staff turnover	14%	24%	62%
Insufficient educational and workforce training partnership opportunities	11%	47%	42%

Source: UMDI Connecticut Business Survey, 2014

Note: This includes only the 115 firms responding that skilled workers were a barrier.

### ***Business Assistance Programs***

Table 31 below shows business assistance needs identified by survey respondents. The top five business assistance needs included social media and website optimization (50 percent), advertising and marketing (49 percent), networking with other businesses and sharing best practices (48 percent), market and customer research (46 percent), and employee recruitment and training (43 percent). The next two types of business assistance needs are directly related to business leadership and management; 36 percent of surveyed firms responded to being interested in leadership or management training and 32 percent responded to being interested in business plan development assistance. These responses are particularly interesting given the fact that most firms responded that leadership and management capabilities were key factors in business success.

**Table 31: Demand for various types of business assistance**

Type of Business Assistance Needed	"Yes" Response		"No" Response	
	Number of Firms	Percent of Total	Number of Firms	Percent of Total
Social media and website optimization	93	50%	92	50%
Advertising and marketing	91	49%	94	51%
Networking with other businesses sharing best practices	89	48%	96	52%
Market and customer research	85	46%	100	54%
Employee recruitment and training	79	43%	106	57%
Leadership or management training	67	36%	118	64%
Business plan development	60	32%	125	68%
New product or service development	57	31%	128	69%
Operations, strategic, and succession planning	55	30%	130	70%
Improved information and navigation for available business services and programs	51	28%	134	72%
Accounting, bookkeeping, and financial planning	43	23%	132	77%
Managing risk	40	22%	145	78%
Immigrant business owner assistance	19	10%	166	90%
Export assistance	17	9%	168	91%

Source: UMDI Connecticut Business Survey, 2014

***Financing***

The final questions of the survey focused on financing. Financing questions can be challenging for businesses to respond to as they might be uncomfortable answering, they may worry about indicating competitive disadvantages, or, despite the efforts to reach decision-makers, the respondent may not have full knowledge of this aspect of the business. Table 32 below shows that 42 percent of surveyed firms indicated they have successfully access needed financing over the past year. On the other hand, 23 percent were not able to get the financing they needed. Thirty-six percent of surveyed firms did not seek financing or credit.

**Table 32: Ability to access financing over the past year**

Access to Finance	All Business Survey Firms	
	Number of Firms	Percent of Total
Yes, able to get financing needed	77	42%
No, not able to get financing needed	42	23%
Did not seek financing or credit	66	36%
<b>Total</b>	<b>185</b>	<b>100%</b>

Source: UMDI Connecticut Business Survey, 2014

Table 33 below considers anticipated financing needs over the next three years. The majority of firms surveyed (63 percent) do not anticipate they will need financing in the next three years. Nineteen percent of surveyed firms indicated that they anticipate needing financing in the next three years. Eighteen percent of firms surveyed were not sure if they would need financing in the next three years. Interestingly, nearly two-thirds of firms tried to access financing in the last year (with 42 percent successfully getting financing), but less than 20 percent think they will need financing in the next three years. It is unclear why these two numbers are so different. It could be that most firms that need financing already received the capital they needed in the last year. That seems unlikely though. It could also mean that local firms may be overly optimistic about not needing extra capital to fund business expenses. This is a question that could use further analysis in the future.

**Table 33: Financing Needs in the Next Three Years**

Anticipation of Future Finance Needs	Business Survey Firms	
	Number of Firms	Percent of Total
Yes, will need financing	36	19%
No, will not need financing	116	63%
I don't know	33	18%
<b>Total</b>	<b>185</b>	<b>100%</b>

Source: UMDI Connecticut Business Survey, 2014

Firms that expected needing financing in the next three years were asked to identify how they anticipated using financing. Table 34 below shows the most common answers regarding the primary needs for financing. The top three primary types of financing needs include equipment or technology, cash flow/bills/working capital, and business expansion. Half of the respondents that indicated a need for financing suggested they primarily wanted funding to enhance equipment or technology needs. A quarter of respondents would seek funding to aid with cash flow and work capital needs.

**Table 34: Primary Types of Financing Needs**

Primary Need for Financing	Business Survey Firms
Equipment or Technology	18
Cash Flow/Bills/Working Capital	9
Expansion	4
Operations	1
Marketing/Advertising	1
Relocating	1
Repairs/Maintenance	1

Source: UMDI Connecticut Business Survey, 2014

Notes: 'Equipment' category includes vehicles. 'Cash Flow' category includes inventory, capital, and receivables. 'Operations' category consists of labor.

Table 35 below displays all mentioned needs for firms anticipating to seek financing in the next three years. Similar to the primary needs for financing, the not common need for financing reported was for equipment and technology, followed by cash flow/bills/working capital, expansion, and new products or service. In total, 25 firms mentioned wanting financing for equipment and technology.

**Table 35: Survey Question 17: All Reported Types of Financing Needs**

All Needs for Financing	Business Survey Firms
Equipment or Technology	25
Cash Flow/Bills/Working Capital	17
Expansion	10
New Product or Service	4
Marketing/Advertising	2
Repairs and Maintenance	2
Operations	2
Infrastructure	1
Relocating	1
Taxes	1

Source: UMDI Connecticut Business Survey, 2014

Notes: 'Equipment' category includes vehicles and software. 'Cash Flow' category includes inventory, capital, receivables, finance, and refinancing. 'Expansion' category includes growth and new property. 'Operations' category includes labor.

## Summary of Key Findings and Points for Consideration

This study of business growth in the Capital Region, with a focus on establishment level data, provides two key areas of understanding. First, the profile of small to medium-sized businesses in the study group sheds light on the mix of establishments by industry, growth in jobs and sales, and location. Second, the completion of 185 detailed business surveys provides a rich set of business feedback on the region's economic conditions in terms of success factors, barriers to growth, and areas for business and financial assistance. Note that businesses with less than five employees and more than 500 employees in 2007 were excluded from this analysis. Key findings from this study include:

- Small businesses predominate our study group in the Capital Region: 71 percent of firms in the study group have fewer than 20 employees. Similarly, 70 percent of businesses responding to the telephone survey had 10 employees or less.
- The vast majority (88 percent) of small to medium sized firms in the Capital Region experienced stable job growth from 2007 to 2012, a time period in which the region saw a 4.7 percent decrease in total establishments and 5.7 percent decrease in total employment. The large number of surviving firms that experienced stable or positive job growth, along with the many more with increased sales revenue, helps demonstrate the resilience of the economy during the Great Recession and the dynamic nature of small to medium -sized businesses.
- The most notable industry in terms of employment change in the the Capital Region is Manufacturing. Generally speaking, the distribution of growth firms by industry is fairly similar to the distribution of all firms by industry. The most notable exception to this is Manufacturing. While the Manufacturing industry makes up 11 percent of all firms in our study universe, it makes up 20 percent of all growth firms and 19 percent of all fast growing firms in our study. Interestingly, Manufacturing is disproportionately represented among declining firms as well, making up 18 percent of all declining firms.
- There is some variation and volatility within the Manufacturing industry in terms of job growth. The most notable declining manufacturing industry was paper manufacturing. While paper manufacturers make up eight percent of all manufacturing firms in the Capital Region, they make up 10 percent of declining manufacturing firms. Conversely, Electrical Equipment, Appliance, and Component Manufacturing is the most notable growth subindustry within Manufacturing. While this subindustry makes up seven percent of all manufacturing firms in the Capital Region, it makes up 10 percent of all growth manufacturing firms. Interestingly, some subsectors of manufacturing show concentrations of both growth and decline. Fabricated Metal Product Manufacturing (12 percent of all manufacturing firms, 17 percent of growth manufacturing firms, and 14 percent of declining manufacturing firms) and Machinery Manufacturing (six percent total, 12 percent growth firms, eight percent decline) are both overrepresented among growth and declining manufacturing firms.

- Of the fast growing firms, 89 percent were small businesses with 5-99 employees. The two employment tiers with the largest percentage of fast growing firms were in the 10-19 employment size range at 36 percent, followed by the 20-49 employment size range with 31 percent of all fast growing firms.
- Small businesses in the region hold the key to firm growth and decline. In the Capital Region there is a higher concentration of growth firms with 10-19, 20-49, and 50-99 employees than the overall universe of businesses. Conversely, firms with 1-4, 5-9, and 10-19 employees make up the bulk of declining firms.
- More sales growth than job growth was experienced during the study period. More sales growth is estimated for the future. The historical data on job and sales growth, along with business estimates of higher sales growth than job growth in the coming years, provides evidence of businesses expanding revenue while holding the number of employees constant. This is a sign of productivity increases and more cautious hiring plans. While only six percent of study firms experienced job growth during the study period, nearly 40 percent experienced sales growth. It appears it took moderate to fast sales growth (25-50 percent and higher) before firms would hire during the study period. In the survey, 34 percent of firms expected to increase employment in the next three years, while 67 percent expected sales to grow over the same time period.
- Forty-four percent of firms surveyed have brought innovative new products or services to the market in the last three years. Fourteen percent felt innovation was a central component to their business model.
- The primary market for surveyed businesses is Connecticut and the Northeast. Over half of all surveyed firms indicated their primary market was local (Connecticut/Capital Region) and 25 percent of firms indicated their primary market was regional (Northeast).
- Fifty-four percent of surveyed businesses thought the Capital Region area was a good or excellent location for their business to succeed, with 42 percent of responding businesses indicating “good”, and another 12 percent indicating it was an “excellent” location for success.
- Eighty-six percent of surveyed firms are actively trying to grow their business. Most of this group (66 percent) would do so as market conditions allowed. The remaining 19 percent are anticipating fast growth.
- The Capital Region’s skilled workforce is a key to making or breaking a business: 51 percent of firms (and 60 percent of growing firms) named the availability of a skilled workforce as a major contributor to their success, while 36 percent of firms (and 37 percent of growing firms) cited the lack of availability of skilled workers as a major barrier to success.
- The top five major success factors cited by businesses surveyed were: management and leadership capabilities, market demand for products and services, availability of skilled workers, strength of education and workforce development system, and government policies. The top three factors for growing firms were market demand for products and services, management and leadership capabilities, and availability of skilled workers.

- The top five major barriers to success cited by businesses surveyed were: the cost of doing business (labor, real estate, taxes, energy, etc.), availability of skilled workers, market demand, permitting/regulations, and cash flow management.
- Health care costs and taxes are the biggest cost concerns for businesses. Two-thirds of firms that responded that the cost of doing business was a major barrier to business success identified health care costs as a “big problem”. Sixty-three percent of such firms cited taxes as a “big problem”. The next highest ranked barrier was energy costs, but only 41 percent of firms ranked this as a “big problem”.
- When thinking of worker quality, middle-skill and technical candidates were the largest concern of survey respondents. Sixty-eight percent of surveyed firms that identified the availability of skilled workers as a barrier to business success responded that the lack of trained middle-skill and technical candidates was at least a somewhat relevant concern. Comparatively, only 49 percent of businesses felt the same way about college level candidates.
- Cash flow management, obtaining financing, and the need for new equipment, technology, process, or efficiency are all mid-level barriers to success for all firms, and for all growing firms. These issues provide some evidence of the need for financing assistance by regional firms.
- Growing firms expressed concern over the availability of space for facility expansion. Twenty percent of growing firms surveyed said the availability of space was a major barrier to success, compared to just eight percent of all firms surveyed.
- Nearly two-thirds of surveyed businesses tried to access financing or credit in the last year, with 42 percent getting needed financing and 23 percent not being able to get needed financing. Interestingly, only 20 percent of surveyed firms expect to need financing in the next year.
- The top five needs for business assistance among survey respondents were social media and website optimization, advertising and marketing, networking with other businesses sharing best practices, market and customer research, and employee recruitment and training.
- Firms that anticipate needing financing in the next three years primarily plan to use it to purchase new equipment or technology.

The above finding, as well as the larger discussion of our NETS and business survey analysis, raises a few key points to consider when thinking about business growth in the Capital Region:

- This research shows that smaller firms, particularly those with less than 20 employees are in a delicate position in terms of short and long-term job change. There is a higher concentration of growth firms with between 10-99 employees than the overall universe of businesses for this study. Conversely, the bulk of declining firms were businesses with 20 or fewer employees. Over 30 percent of declining firms had between 1-4 employees. This is an interesting group as they only are in our study universe because they had at least five employees in 2007. So, firms with 1-4 employees in 2012 could only be “decliners” in this



study. It is likely that these were firms that had small employment in 2007 (between 5-19 employees) and slipped in to the 1-4 employee group by 2012. In total, the research shows that small companies can break either way in terms of growth and decline. It would be important to target different kinds of business services to companies in this size range to try and avoid firm decline and encourage employment growth.

- The Manufacturing industry stands in an interesting place with regards in firm growth and decline. The Manufacturing industry stood out among both growing and declining industries. There was a great deal of variation and volatility within the industry. Greater examination of the Manufacturing industry in the Capital Region may be in order to better understand the suite of issues facing these businesses and why there is less employment stability in this sector than all other sectors in the Capital Region economy.
- Growth firms are particularly interested in the availability of space for facility expansion. While only eight percent of surveyed firms saw the availability of space for expansion as a barrier to business success, 20 percent of growth firms saw it as a barrier. Comparatively, this was on the same order of magnitude for growth firms as market demand, permitting and regulation, and cash flow management. In order to keep growing firms in the region, local officials will need to consider the facility needs for growth industries, which highlights the importance of services and information available to firms.
- Access to available financing is important to small businesses. Interestingly, nearly two-thirds of firms tried to access financing in the last year (with 42 percent successfully getting financing), but less than 20 percent think they will need financing in the next three years. It is unclear why these two numbers are so different. It could be that most firms that need financing already received the capital they needed in the last year. It could also mean that local firms may be overly optimistic about not needing extra capital to fund business expenses. This is a question that could use further analysis in the future. Regardless, the importance of financing for upgrading equipment and technology is very clear from our survey. Over half of the firms expecting access financing in the next three years cited equipment upgrades as their primary reason. Other important reasons for financing appeared to be for cash flow and working capital and business expansion.
- The primary concerns about worker quality appear to be focused on middle-skill candidates. Interestingly, there are some conflicting statements about worker quality in the region. Worker quality was listed as both a major factor and barrier to business success. Questions about the education or workforce development system showed the system to be the 4<sup>th</sup> highest ranked factor for business success. However, 58 percent of firms concerned about worker quality stated that insufficient educational and workforce training partnership opportunities were a relevant concern (though, most of these said “somewhat relevant” as opposed to “very relevant”). Regardless, most worker quality concerns appear focused on the lack of trained middle-skill and technical candidates. Given the feedback on workforce training partnerships, business support organization and job training professionals need to work with local businesses to better understand middle-skill and technical needs.
- Leadership and management support are key issues for local firms. Aside from the commonly cited concerns about business costs and worker quality, local businesses cited leadership as an important factor

in growth. In addition, there was high interest in business assistance around social media and website optimization, advertising and marketing, and business networking. There was also interest, to a lesser extent in leadership and management and business plan development training. Together, these issues suggest that business leadership mentoring could be a useful tool in helping capitalize on the growth potential for small businesses in the region.

## About the UMass Donahue Institute

The UMass Donahue Institute (UMDI) is the public service outreach and economic development unit of the University of Massachusetts President's Office. Established in 1971, the UMDI coordinates multi-campus initiatives that link UMass, other public and private higher education, and other external resources with the needs of government agencies, corporations, and nonprofit organizations. UMDI provides significant economic and public policy analysis, organizational development, training, education, financial management education, research, and evaluation to federal and state agencies, nonprofits, industry associations, and corporations. UMDI draws on its unique position within higher education to serve as a bridge between theory, innovation, and real-world applications.

The Economic and Public Policy Research (EPPR) group is a leading provider of applied research, helping clients make more informed decisions about strategic economic and public policy issues. EPPR produces in-depth economic impact and industry studies that help clients build credibility, gain visibility, educate constituents, and plan economic development initiatives. EPPR is known for providing unbiased economic analysis on state-level economic policy issues in Massachusetts and beyond, and has completed a number of industry studies on IT, defense industries, telecommunications, health care, and transportation. Their trademark publication is called MassBenchmarks, an economic journal that presents timely information concerning the performance of and prospects for the Massachusetts economy, including economic analyses of key industries that make up the economic base of the state.

## Appendix A – Additional NETS Data Tables

The following tables provide additional information about the firms in the study group using the NETS dataset and the variables it offers.

As mentioned previously, the NETS dataset is based on responses to the Dun & Bradstreet business survey. Some of the variables offered by Dun & Bradstreet's, however, are not answered by all businesses (for example, not all firms report whether they are minority or women owned). Therefore, in the tables that follow, certain variables should be used with caution when drawing conclusions about firms in the study group or firms overall in the region. Keep in mind that our study universe included 10,754 businesses in Hartford and Tolland counties. These were businesses that had between five and 500 employees in 2007, still existed in 2012, and were in the pre-selected group of private for profit industries. For more information on how businesses were selected for this study, see the Methodology section of this report.

### Business Size

**Table A1: Study Firms by Employment Size Range in Hartford and Tolland Counties, 2012**

Size Range	Number of Firms	Percent
Size 250+	99	1%
Size 100-249	390	4%
Size 50-99	681	6%
Size 20-49	1,971	18%
Size 10-19	2,880	27%
Size 5-9	4,522	42%
Size 1-4	211	2%
<b>Total</b>	<b>10,754</b>	<b>100%</b>

Source: National Establishment Time Series (NETS) Database, Walls & Associates

\*Note: The size range 1-4 is included because it represents firms that had 5 or more employees in 2007, but who had employment declines from 2007 to 2012 that resulted in employment in 2012 below our study group parameters.

**Table A2: Study Firms by Employment Size Range and Employment Growth Tier in Hartford and Tolland Counties, 2012**

Employment Size Range	Employment Growth Tier					Total
	Fast	Moderate	Slow	Stable	Decline	
1-4	0	0	0	0	211	211
5-9	30	28	49	4,245	170	4,522
10-19	109	38	43	2,548	142	2,880
20-49	94	50	55	1,657	115	1,971
50-99	37	21	16	569	38	681
100-249	29	8	14	321	18	390
250+	6	3	3	82	5	99
<b>Total</b>	<b>305</b>	<b>148</b>	<b>180</b>	<b>9,422</b>	<b>699</b>	<b>10,754</b>

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

\*Note: The size range 1-4 is included because it represents firms that had 5 or more employees in 2007, but who had employment declines from 2007 to 2012 that resulted in employment in 2012 below our study group parameters.

## Minority Ownership

The NETS data is based on responses to the Dunn and Bradstreet business survey, and some variables in the data do not have complete coverage, meaning not all businesses answer all of the questions (for example, not all firms report whether they are minority or women owned). Therefore, in the tables that follow, certain variables should be used with caution when drawing conclusions about firms in the study group or firms overall in the region.

**Table A3: Study Firms Indicating Minority Ownership by Employment Growth Tier in Hartford and Tolland Counties, 2012**

Employment Growth Tier	Total Study Firms	
	Number of Firms	Percent of Total
Fast	18	5%
Moderate	6	2%
Slow	14	4%
Stable	320	82%
Decline	32	8%
<b>Total</b>	<b>390</b>	<b>100%</b>

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

Note: Not all firms report whether they have Minority ownership.

## Women Ownership

**Table A4: Study Firms Indicating Women Ownership by Employment Growth Tier in Hartford and Tolland Counties, 2012**

Employment Growth Tier	Total Study Firms	
	Number of Firms	Percent of Total
Fast	35	4%
Moderate	14	1%
Slow	24	3%
Stable	814	86%
Decline	58	6%
<b>Total</b>	<b>945</b>	<b>100%</b>

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

Note: Not all firms report whether they have Women ownership.

## Legal Status

**Table A5: Study Firms by Legal Status**

Legal Status	Number	Percent
Proprietorship	1,282	17%
Partnership	1,191	16%
Corporation	5,138	67%
Non-Profit	23	0%
<b>Total</b>	<b>7,634</b>	<b>100%</b>

Source: National Establishment Time Series (NETS) Database, Walls & Associates

Note: Not all firms report legal status.

**Table A6: Study Firms by Legal Status and Employment Growth Tier in Pioneer Valley, 2012**

Employment Tier	Proprietorship		Partnership		Corporation		Non-Profit		Total by Growth Tier	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Decline	50	11%	83	18%	330	71%	1	0%	<b>464</b>	<b>100%</b>
Fast	18	9%	68	33%	120	58%	0	0%	<b>206</b>	<b>100%</b>
Moderate	12	11%	19	18%	73	70%	1	1%	<b>105</b>	<b>100%</b>
Slow	10	7%	24	17%	104	74%	2	1%	<b>140</b>	<b>100%</b>
Stable	1,192	18%	997	15%	4,511	67%	19	0%	<b>6,719</b>	<b>100%</b>
<b>Total by Legal Status</b>	<b>1,282</b>	<b>17%</b>	<b>1,191</b>	<b>16%</b>	<b>5,138</b>	<b>67%</b>	<b>23</b>	<b>0%</b>	<b>7,634</b>	<b>100%</b>

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

Note: Not all firms report legal status.

## Import/Export

The “import/export” variable in the NETS dataset indicates where a firm has answered the Dunn and Bradstreet business survey to indicate whether they import products or services from or export products or services to overseas nations, or both.

**Table A7: Study Firms Importing, Exporting or Both, 2012**

Import/Export Status	Total Study Firms	
	Number of Firms	Percent of Total
Both Import and Export	44	12%
Export	26	7%
Import	289	81%
<b>Total</b>	<b>359</b>	<b>100%</b>

Source: National Establishment Time Series (NETS) Database, Walls & Associates

Note: Not all firms report an import/export status.

**Table A8: Study Firms Importing, Exporting or Both, by Employment Growth Tier, 2012**

Employment Growth Tier	Both Import and Export		Export		Import		Total by Growth Tier	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Fast	1	6%	1	6%	16	89%	<b>18</b>	<b>100%</b>
Moderate	1	9%	3	27%	7	64%	<b>11</b>	<b>100%</b>
Slow	1	6%	0	0%	16	94%	<b>17</b>	<b>100%</b>
Stable	34	13%	18	7%	210	80%	<b>262</b>	<b>100%</b>
Decline	7	14%	4	8%	40	78%	<b>51</b>	<b>100%</b>
<b>Total by Export/Import Status</b>	<b>44</b>	<b>12%</b>	<b>26</b>	<b>7%</b>	<b>289</b>	<b>81%</b>	<b>359</b>	<b>100%</b>

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

Note: Not all firms report an import/export status.

**Table A9: Study Firms Importing, Exporting or Both, by Sales Growth Tier, 2012**

Sales Growth Tier	Both Import and Export		Export		Import		Total by Growth Tier	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Fast	2	5%	4	9%	37	86%	<b>43</b>	<b>100%</b>
Moderate	4	14%	3	11%	21	75%	<b>28</b>	<b>100%</b>
Slow	9	11%	6	7%	67	82%	<b>82</b>	<b>100%</b>
Stable	4	13%	2	6%	26	81%	<b>32</b>	<b>100%</b>
Decline	25	14%	11	6%	138	79%	<b>174</b>	<b>100%</b>
<b>Total by Export/Import Status</b>	<b>44</b>	<b>12%</b>	<b>26</b>	<b>7%</b>	<b>289</b>	<b>81%</b>	<b>359</b>	<b>100%</b>

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

Note: Not all firms report an import/export status.



## Industry

**Table A10: Number of Study Firms by Industry (2-Digit NAICS) and Employment Growth Tier, 2012**

2-Digit NAICS Codes	NAICS Description	Employment Growth Tier					
		Fast	Moderate	Slow	Stable	Decline	Total
11	Agriculture, Forestry, Fishing and Hunting	3	1	1	52	7	64
21	Mining, Quarrying, and Oil and Gas Extraction	0	0	0	6	0	6
23	Construction	25	11	16	832	82	966
31-33	Manufacturing	57	25	46	893	125	1146
42	Wholesale Trade	27	10	18	601	65	721
44-45	Retail Trade	39	15	19	1,431	91	1595
48-49	Transportation & Warehousing	6	3	6	216	22	241
51	Information	12	4	1	162	12	191
52	Finance and Insurance	17	9	5	605	45	681
53	Real Estate and Rental and Leasing	2	2	0	93	16	113
54	Professional, Scientific, and Technical Services	30	23	28	1,052	84	1217
55	Management of Companies and Enterprises	1	0	0	8	1	10
56	Administrative and Support and Waste Management and Remediation Services	17	8	8	484	32	549
61	Educational Services	7	2	0	85	7	101
62	Health Care and Social Assistance	32	16	14	1,195	41	1298
71	Arts, Entertainment, and Recreation	4	2	4	229	11	250
72	Accommodation and Food Services	14	8	8	861	35	926
81	Other Services (except Public Administration)	12	9	6	614	35	676
99	Non-classifiable Establishments	0	0	0	3	0	3
<b>Total</b>		<b>305</b>	<b>148</b>	<b>180</b>	<b>9,422</b>	<b>699</b>	<b>10,754</b>

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

**Table A11: Percent of Study Firms by Industry (2-Digit NAICS) and Employment Growth Tier, 2012**

2-Digit NAICS Codes	NAICS Description	Employment Growth Tier					
		Fast	Moderate	Slow	Stable	Decline	Total
11	Agriculture, Forestry, Fishing and Hunting	4.7%	1.6%	1.6%	81.3%	10.9%	100%
21	Mining, Quarrying, and Oil and Gas Extraction	0.0%	0.0%	0.0%	100.0%	0.0%	100%
23	Construction	2.6%	1.1%	1.7%	86.1%	8.5%	100%
31-33	Manufacturing	5.0%	2.2%	4.0%	77.9%	10.9%	100%
42	Wholesale Trade	3.7%	1.4%	2.5%	83.4%	9.0%	100%
44-45	Retail Trade	2.4%	0.9%	1.2%	89.7%	5.7%	100%
48-48	Transportation & Warehousing	2.5%	1.2%	2.5%	89.6%	9.1%	105%
51	Information	6.3%	2.1%	0.5%	84.8%	6.3%	100%
52	Finance and Insurance	2.5%	1.3%	0.7%	88.8%	6.6%	100%
53	Real Estate and Rental and Leasing	1.8%	1.8%	0.0%	82.3%	14.2%	100%
54	Professional, Scientific, and Technical Services	2.5%	1.9%	2.3%	86.4%	6.9%	100%
55	Management of Companies and Enterprises	10.0%	0.0%	0.0%	80.0%	10.0%	100%
56	Administrative and Support and Waste Management and Remediation Services	3.1%	1.5%	1.5%	88.2%	5.8%	100%
61	Educational Services	6.9%	2.0%	0.0%	84.2%	6.9%	100%
62	Health Care and Social Assistance	2.5%	1.2%	1.1%	92.1%	3.2%	100%
71	Arts, Entertainment, and Recreation	1.6%	0.8%	1.6%	91.6%	4.4%	100%
72	Accommodation and Food Services	1.5%	0.9%	0.9%	93.0%	3.8%	100%
81	Other Services (except Public Administration)	1.8%	1.3%	0.9%	90.8%	5.2%	100%
99	Non-classifiable Establishments	0.0%	0.0%	0.0%	100.0%	0.0%	100%
<b>Total</b>		<b>2.8%</b>	<b>1.4%</b>	<b>1.7%</b>	<b>87.6%</b>	<b>6.5%</b>	<b>100%</b>

Source: National Establishment Time Series (NETS) Database, Walls &amp; Associates; UMDI Analysis

Table A12: Number of Study Firms by Industry (3-Digit NAICS) and Employment Growth Tier, 2012

NAICS 3-Digit	NAICS Description	Employment Tier					Total
		Fast	Moderate	Slow	Stable	Decline	
	<b>Total</b>	<b>305</b>	<b>148</b>	<b>180</b>	<b>9,422</b>	<b>699</b>	<b>10,754</b>
111	Crop Production	1	1	1	31	5	39
112	Animal Production	1	0	0	15	1	17
115	Forestry and Logging	1	0	0	6	1	8
212	Fishing, Hunting and Trapping	0	0	0	3	0	3
213	Support Activities for Agriculture and Forestry	0	0	0	3	0	3
236	Mining (except Oil and Gas)	7	3	6	219	28	263
237	Construction of Buildings	2	0	1	100	9	112
238	Heavy and Civil Engineering Construction	16	8	9	513	45	591
311	Specialty Trade Contractors	2	3	1	52	2	60
312	Food Manufacturing	0	0	0	8	0	8
313	Beverage and Tobacco Product Manufacturing	1	0	1	7	3	12
314	Textile Mills	0	0	0	7	2	9
315	Textile Product Mills	0	0	0	9	1	10
316	Apparel Manufacturing	0	0	0	4	0	4
321	Leather and Allied Product Manufacturing	0	1	1	22	3	27
322	Wood Product Manufacturing	1	0	0	13	2	16
323	Paper Manufacturing	2	0	3	72	12	89
324	Printing and Related Support Activities	0	0	0	2	0	2
325	Petroleum and Coal Products Manufacturing	2	0	1	24	5	32
326	Chemical Manufacturing	3	0	1	38	4	46
327	Plastics and Rubber Products Manufacturing	2	0	1	22	4	29
331	Nonmetallic Mineral Product Manufacturing	4	0	2	18	5	29
332	Primary Metal Manufacturing	13	5	13	262	34	327
333	Fabricated Metal Product Manufacturing	9	5	8	99	17	138
334	Machinery Manufacturing	3	4	8	48	10	73
335	Computer and Electronic Product Manufacturing	1	1	0	34	3	39
336	Electrical Equipment, Appliance, and Component Manufacturing	7	3	3	61	8	82
337	Transportation Equipment Manufacturing	3	1	1	35	4	44
339	Furniture and Related Product Manufacturing	4	2	2	56	6	70

Table A13: Number of Study Firms by Industry (3-Digit NAICS) and Employment Growth Tier, 2012 (cont.)

NAICS 3-Digit	NAICS Description	Employment Tier					
		Fast	Moderate	Slow	Stable	Decline	Total
423	Miscellaneous Manufacturing	19	8	15	459	54	555
424	Merchant Wholesalers, Durable Goods	8	2	3	142	11	166
441	Merchant Wholesalers, Nondurable Goods	2	3	2	208	6	221
442	Motor Vehicle and Parts Dealers	2	1	2	75	6	86
443	Furniture and Home Furnishings Stores	2	1	2	56	4	65
444	Electronics and Appliance Stores	0	2	0	108	7	117
445	Building Material and Garden Equipment and Supplies Dealers	13	4	3	198	11	229
446	Food and Beverage Stores	2	1	1	139	18	161
447	Health and Personal Care Stores	0	0	0	97	4	101
448	Gasoline Stations	3	3	2	179	15	202
451	Clothing and Clothing Accessories Stores	7	0	3	75	7	92
452	Sporting Goods, Hobby, Book, and Music Stores	3	0	2	55	2	62
453	General Merchandise Stores	2	0	1	163	7	173
454	Miscellaneous Store Retailers	3	0	1	78	4	86
481	Nonstore Retailers	0	0	0	9	2	11
482	Rail Transportation	0	0	0	2	0	2
484	Water Transportation	3	1	0	66	3	73
485	Truck Transportation	1	0	4	56	2	63
487	Transit and Ground Passenger Transportation	0	0	0	1	0	1
488	Support Activities for Transportation	1	2	2	51	1	57
492	Postal Service	1	0	0	15	2	18
493	Couriers and Messengers	0	0	0	16	0	16
511	Warehousing and Storage	5	2	0	53	3	63
512	Publishing Industries (except Internet)	2	0	1	18	2	23
515	Motion Picture and Sound Recording Industries	2	0	0	23	2	27
517	Broadcasting (except Internet)	3	2	0	39	3	47
518	Telecommunications	0	0	0	28	2	30
519	Data Processing, Hosting and Related Services	0	0	0	1	0	1
522	Credit Intermediation and Related Activities	8	2	5	247	19	281
523	Securities, Commodity Contracts, and Other Financial Investments and Related Activities	0	3	0	86	6	95

**Table A14: Number of Study Firms by Industry (3-Digit NAICS) and Employment Growth Tier, 2012 (cont.)**

NAICS 3-Digit	NAICS Description	Employment Tier					Total
		Fast	Moderate	Slow	Stable	Decline	
524	Insurance Carriers and Related Activities	9	4	0	265	20	298
525	Funds, Trusts, and Other Financial Vehicles	0	0	0	7	0	7
532	Rental and Leasing Services	2	2	0	88	16	108
533	Lessors of Nonfinancial Intangible Assets	0	0	0	5	0	5
541	Professional, Scientific, and Technical Services	30	23	28	1,052	84	1,217
551	Management of Companies and Enterprises	1	0	0	8	1	10
561	Administrative and Support Services	11	7	5	435	28	486
562	Waste Management and Remediation Services	6	1	3	49	4	63
611	Educational Services	7	2	0	85	7	101
621	Ambulatory Health Care Services	18	12	10	931	29	1,000
623	Nursing and Residential Care Facilities	2	2	3	90	2	99
624	Social Assistance	12	2	1	174	10	199
711	Performing Arts, Spectator Sports, and Related Industries	1	0	0	50	2	53
712	Museums, Historical Sites, and Similar Institutions	3	0	1	22	5	31
713	Amusement, Gambling, and Recreation Industries	0	2	3	157	4	166
721	Accommodation	1	0	2	68	7	78
722	Food Services and Drinking Places	13	8	6	793	28	848
811	Repair and Maintenance	10	5	3	306	24	348
812	Personal and Laundry Services	2	4	3	308	11	328
999	Non-classifiable Establishments	0	0	0	3	0	3

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

Note: Sector 491 "Postal Service" does not include the U.S. Postal Service. The firms in this category appear to have incorrectly reported their industry (i.e. leasing firms categorizing themselves as postal service).

**Table A15: Percent of Study Firms by Industry (3-Digit NAICS) and Employment Growth Tier, 2012**

NAICS 3-Digit	NAICS Description	Employment Tier					
		Fast	Moderate	Slow	Stable	Decline	Total
	<b>Total</b>	<b>3%</b>	<b>1%</b>	<b>2%</b>	<b>88%</b>	<b>6%</b>	<b>100%</b>
111	Crop Production	3%	3%	3%	79%	13%	100%
112	Animal Production	6%	0%	0%	88%	6%	100%
115	Forestry and Logging	13%	0%	0%	75%	13%	100%
212	Fishing, Hunting and Trapping	0%	0%	0%	100%	0%	100%
213	Support Activities for Agriculture and Forestry	0%	0%	0%	100%	0%	100%
236	Mining (except Oil and Gas)	3%	1%	2%	83%	11%	100%
237	Construction of Buildings	2%	0%	1%	89%	8%	100%
238	Heavy and Civil Engineering Construction	3%	1%	2%	87%	8%	100%
311	Specialty Trade Contractors	3%	5%	2%	87%	3%	100%
312	Food Manufacturing	0%	0%	0%	100%	0%	100%
313	Beverage and Tobacco Product Manufacturing	8%	0%	8%	58%	25%	100%
314	Textile Mills	0%	0%	0%	78%	22%	100%
315	Textile Product Mills	0%	0%	0%	90%	10%	100%
316	Apparel Manufacturing	0%	0%	0%	100%	0%	100%
321	Leather and Allied Product Manufacturing	0%	4%	4%	81%	11%	100%
322	Wood Product Manufacturing	6%	0%	0%	81%	13%	100%
323	Paper Manufacturing	2%	0%	3%	81%	13%	100%
324	Printing and Related Support Activities	0%	0%	0%	100%	0%	100%
325	Petroleum and Coal Products Manufacturing	6%	0%	3%	75%	16%	100%
326	Chemical Manufacturing	7%	0%	2%	83%	9%	100%
327	Plastics and Rubber Products Manufacturing	7%	0%	3%	76%	14%	100%
331	Nonmetallic Mineral Product Manufacturing	14%	0%	7%	62%	17%	100%
332	Primary Metal Manufacturing	4%	2%	4%	80%	10%	100%
333	Fabricated Metal Product Manufacturing	7%	4%	6%	72%	12%	100%
334	Machinery Manufacturing	4%	5%	11%	66%	14%	100%
335	Computer and Electronic Product Manufacturing	3%	3%	0%	87%	8%	100%
336	Electrical Equipment, Appliance, and Component Manufacturing	9%	4%	4%	74%	10%	100%
337	Transportation Equipment Manufacturing	7%	2%	2%	80%	9%	100%
339	Furniture and Related Product Manufacturing	6%	3%	3%	80%	9%	100%

Source: National Establishment Time Series (NETS) Database, Walls &amp; Associates; UMDI Analysis

Table A16: Percent of Study Firms by Industry (3-Digit NAICS) and Employment Growth Tier, 2012 (cont.)

NAICS 3-Digit	NAICS Description	Employment Tier					
		Fast	Moderate	Slow	Stable	Decline	Total
423	Miscellaneous Manufacturing	3%	1%	3%	83%	10%	100%
424	Merchant Wholesalers, Durable Goods	5%	1%	2%	86%	7%	100%
441	Merchant Wholesalers, Nondurable Goods	1%	1%	1%	94%	3%	100%
442	Motor Vehicle and Parts Dealers	2%	1%	2%	87%	7%	100%
443	Furniture and Home Furnishings Stores	3%	2%	3%	86%	6%	100%
444	Electronics and Appliance Stores	0%	2%	0%	92%	6%	100%
445	Building Material and Garden Equipment and Supplies Dealers	6%	2%	1%	86%	5%	100%
446	Food and Beverage Stores	1%	1%	1%	86%	11%	100%
447	Health and Personal Care Stores	0%	0%	0%	96%	4%	100%
448	Gasoline Stations	1%	1%	1%	89%	7%	100%
451	Clothing and Clothing Accessories Stores	8%	0%	3%	82%	8%	100%
452	Sporting Goods, Hobby, Book, and Music Stores	5%	0%	3%	89%	3%	100%
453	General Merchandise Stores	1%	0%	1%	94%	4%	100%
454	Miscellaneous Store Retailers	3%	0%	1%	91%	5%	100%
481	Nonstore Retailers	0%	0%	0%	82%	18%	100%
482	Rail Transportation	0%	0%	0%	100%	0%	100%
484	Water Transportation	4%	1%	0%	90%	4%	100%
485	Truck Transportation	2%	0%	6%	89%	3%	100%
487	Transit and Ground Passenger Transportation	0%	0%	0%	100%	0%	100%
488	Support Activities for Transportation	2%	4%	4%	89%	2%	100%
492	Postal Service	6%	0%	0%	83%	11%	100%
493	Couriers and Messengers	0%	0%	0%	100%	0%	100%
511	Warehousing and Storage	8%	3%	0%	84%	5%	100%
512	Publishing Industries (except Internet)	9%	0%	4%	78%	9%	100%
515	Motion Picture and Sound Recording Industries	7%	0%	0%	85%	7%	100%
517	Broadcasting (except Internet)	6%	4%	0%	83%	6%	100%
518	Telecommunications	0%	0%	0%	93%	7%	100%
519	Data Processing, Hosting and Related Services	0%	0%	0%	100%	0%	100%
522	Credit Intermediation and Related Activities	3%	1%	2%	88%	7%	100%
523	Securities, Commodity Contracts, and Other Financial Investments and Related Activities	0%	3%	0%	91%	6%	100%



**Table A17: Percent of Study Firms by Industry (3-Digit NAICS) and Employment Growth Tier, 2012 (cont.)**

NAICS 3-Digit	NAICS Description	Employment Tier					
		Fast	Moderate	Slow	Stable	Decline	Total
524	Insurance Carriers and Related Activities	3%	1%	0%	89%	7%	100%
525	Funds, Trusts, and Other Financial Vehicles	0%	0%	0%	100%	0%	100%
532	Rental and Leasing Services	2%	2%	0%	81%	15%	100%
533	Lessors of Nonfinancial Intangible Assets	0%	0%	0%	100%	0%	100%
541	Professional, Scientific, and Technical Services	2%	2%	2%	86%	7%	100%
551	Management of Companies and Enterprises	10%	0%	0%	80%	10%	100%
561	Administrative and Support Services	2%	1%	1%	90%	6%	100%
562	Waste Management and Remediation Services	10%	2%	5%	78%	6%	100%
611	Educational Services	7%	2%	0%	84%	7%	100%
621	Ambulatory Health Care Services	2%	1%	1%	93%	3%	100%
623	Nursing and Residential Care Facilities	2%	2%	3%	91%	2%	100%
624	Social Assistance	6%	1%	1%	87%	5%	100%
711	Performing Arts, Spectator Sports, and Related Industries	2%	0%	0%	94%	4%	100%
712	Museums, Historical Sites, and Similar Institutions	10%	0%	3%	71%	16%	100%
713	Amusement, Gambling, and Recreation Industries	0%	1%	2%	95%	2%	100%
721	Accommodation	1%	0%	3%	87%	9%	100%
722	Food Services and Drinking Places	2%	1%	1%	94%	3%	100%
811	Repair and Maintenance	3%	1%	1%	88%	7%	100%
812	Personal and Laundry Services	1%	1%	1%	94%	3%	100%
999	Non-classifiable Establishments	0%	0%	0%	100%	0%	100%

Source: National Establishment Time Series (NETS) Database, Walls & Associates; UMDI Analysis

Note: Sector 491 "Postal Service" does not include the U.S. Postal Service. The firms in this category appear to have incorrectly reported their industry (i.e. leasing firms categorizing themselves as postal service).

## Appendix B – Survey Instrument

### Connecticut Knowledge Corridor/Greater Hartford Growth Business Survey

Hello, my name is \_\_\_\_\_. I am working with a consortium of local economic development and workforce organizations including the MetroHartford Alliance and Capital Workforce Partners to survey Connecticut businesses. The survey is part of an initiative to improve business assistance programs in the Greater Hartford region, such as workforce training, financing, business planning and access to markets and suppliers. Your responses will be used confidentially to inform proactive efforts to assist existing businesses in the region.

Your participation is completely voluntary and completing this survey will take no more than 15 minutes of your time.

**May I continue? If no, please ask if there is a more convenient time to reach them.**

I would like to begin by asking you a few basic questions about your business.

1. How many people do you currently employ, including yourself, but not including contract or temporary workers?  
**1.0** \_\_\_\_\_
  - 1.0a. How many of these positions are part-time? **OPEN RESPONSE**  
**1.0a** \_\_\_\_\_
2. How many job openings are you currently trying to fill? **OPEN RESPONSE**  
**2.0** \_\_\_\_\_
3. Over the next three years, do you expect the number of your employees to:  
**3.0** \_\_\_\_\_ (**Drop down menu**)
  - Increase
  - Decrease
  - Stay the Same
  - Don't Know
  - 3.0a. (**If increase**) By how many employees: **OPEN RESPONSE**  
**3.0a** \_\_\_\_\_
4. I am going to read a series of statements about your sales growth expectations over the next three years. Please choose the one that most accurately fits your business.  
**4.0** \_\_\_\_\_ (**Drop down menu**)
  - I expect no sales growth.
  - Less than 25%
  - Between 25% and 50%
  - Just over 50% to 75%

More than 75%

I don't know.

5. Has your business brought innovative new products or services on to the market in the last three years?

**5.0** \_\_\_\_\_ (Drop down menu)

- Yes – a central component of our business model
- Yes – to some degree
- No
- Unsure

6. What is your company's **primary** market to sell your goods or services?

**6.0** \_\_\_\_\_ (Drop down menu)

- Local – Connecticut/Metro Hartford
- Regional - Northeast
- National
- International

7. What percentage of the goods and services you purchase to operate your business is from Connecticut suppliers and vendors?

**7.0** \_\_\_\_\_ (Drop down menu)

- Less than 25%
- Between 25% and 50%
- Just over 50% to 75%
- More than 75%

Now, I am going to ask you questions about the business climate and the availability of business assistance in the region.

8. Overall, would you currently rate the Metro Hartford region as excellent, good, fair or poor as a location for your business to succeed?

**8.0** \_\_\_\_\_ (Drop down menu)

- Excellent
- Good
- Fair
- Poor

9. Please describe the extent to which the following factors have contributed to the success of your business. (Not a factor; a minor factor; a major factor)

		<b>Not a Factor</b>	<b>A Minor Factor</b>	<b>A Major Factor</b>
a	Market demand for products or services			
b	Access to suppliers and vendors			

c	Availability of skilled workers			
d	Management and leadership capability			
e	Access to financing			
f	Innovation, product, and/or technology improvements			
g	Access to research and development collaborations			
h	Government policies			
i	Strength of education and workforce development system			

10. Are you actively working to grow your business?

**10.0** \_\_\_\_\_ (Drop down menu)

Yes, anticipating fast growth

Yes, as market conditions allow

No

11. Please describe the extent to which the following are barriers to your business' growth. (Not a barrier; a minor barrier; a major barrier)

		<b>Not a Barrier</b>	<b>A Minor Barrier</b>	<b>A Major Barrier</b>
a	Market demand for products or services			
b	Need for new equipment, technology, process or efficiency			
c	Cash flow management			
d	Obtaining financing			
e	Availability of space for facility expansion			
f	The cost of doing business (labor, real estate, energy, taxes, etc.)			
g	Availability of skilled workers			
h	Access to suppliers and vendors			
i	Permitting/Regulations			

12. **(If business costs are a barrier)** What components of business costs are the most problematic in the region?

		<b>A Big Problem</b>	<b>A Minor Problem</b>	<b>Not a Problem</b>
a	Labor costs			
b	Taxes			
c	Real estate			
d	Energy costs			
e.	Health care costs			

13. **(If availability of skilled workers is a barrier)** How relevant are the following factors for your workforce? (For each, indicate very relevant, somewhat relevant, not relevant)

		<b>Very Relevant</b>	<b>Somewhat Relevant</b>	<b>Not Relevant</b>
a	Lack of educated, bachelor's degree or higher candidates			
b	Lack of trained middle skills/technical candidates			
c	Insufficient educational and workforce training partnership opportunities			
d	Weak candidates			
e.	High turnover of staff			

14. Please tell me, yes or no, whether your business would benefit from any of the following types of business advisory assistance or training support, assuming that cost was not a factor.

		<b>Yes</b>	<b>No</b>
a	Accounting, bookkeeping, and financial planning		
b	Operations, strategic, and succession planning		
c	New product or service development		
d	Market and customer research		
e	Leadership or management training		

f	Employee recruitment and training		
g	Social media and website optimization		
i	Business plan development		
j	Advertising and marketing		
k	Export assistance		
l	Managing risk		
m	Networking with other businesses and sharing best practices		
n	Immigrant business owner assistance		
o	Improved information and navigation for available business services and programs		

15. In the last year, have you been able to get the financing or credit you need to operate, grow, or improve your business?

**15.0** \_\_\_\_\_ (Drop down menu)

Yes

No

Have not sought financing or credit

16. Do you anticipate needing financing in the next three years?

**16.0** \_\_\_\_\_ (Drop down menu)

Yes

No

Don't Know (coded response but not offered)

*If YES, go to #17*

*If NO or DON'T KNOW, go to #18*

17. What do you anticipate needing financing for in the next three years? You can give up to three responses.

**OPEN RESPONSE**

**17.a** \_\_\_\_\_.

**17.b** \_\_\_\_\_.

**17.c** \_\_\_\_\_.

(If the respondent needs suggestions...)

Equipment/Technology
Expansion/Acquisition
New Product or Service Development
Marketing/Advertising
New Property/Real Estate
Refinance
Workforce Training
Working Capital (such as receivables or inventory)

18. Your answers to this survey are confidential. However, would you be interested in being contacted by economic development and workforce organizations in the Greater Hartford region to learn more about business assistance programs available in your area?

**18.0** \_\_\_\_\_ (Drop down menu)

Yes

No

If **YES**:            **18.a** \_\_\_\_\_ Name:

**18.b** \_\_\_\_\_ Company:

**18.c** \_\_\_\_\_ Phone Number:

**18.d** \_\_\_\_\_ Email: